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EVOLUTION EXPLAINED

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Evolution Explained

BY

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PREFACE.

THE object of this book is to place before the General Public, in simple language, the chief facts which prove the Law of Evolution, to show how the action of this Law affects the social structure of the Nations and also their relations to the chief dogmatic Religions of the day.

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EVOLUTION EXPLAINED.

CHAPTER I.

THE MEANING OF EVOLUTION.

THE word "Evolution" used in this book is meant to express the gradual development of living organisms from a lower to a higher plane. The same word is often used to express the progress achieved by man in the development of inanimate objects. Anyone who recalls the old type of gun--the arquebus, with an effective fire zone of a few yards, a slow method of firing and loading, and the various improvements that have taken place in the past, culminating in the modern rifle with an effective range of a mile and a rapidity of fire fifty times greater, will appreciate what is meant by the evolution of firearms.

But while it has only taken a few hundred years for man to evolve the wonderful modern rifle, it has taken millions of years to develop living organisms to their present standard. This evolution of man has been brought about by the action of certain laws, called

the laws of Nature, though why the word "Nature" should have been used, we fail to understand. If we believe that the great God who rules over everything is Almighty, we can only come to the conclusion that He must have made these laws, and therefore the laws of Nature are the laws of God. One of the most curious facts about all the religions of the world is the failure to instruct the priests in these very laws which they themselves must acknowledge are the laws of the Deity they all worship.

The chief factors concerned in the raising of a low type to a higher, are the competition between members of the same species, and also between different species for the means of subsistence, also the elimination of the least intelligent brought about by the other forces of Nature, such as floods, earthquakes, forest fires, severe cold, lightning and last, but not least, disease. This struggle, which has been going on for hundreds of thousands of years, has been constantly eliminating the unfit and selecting the fittest, and by this means improving the race of man. If you wish to realize how much we have progressed, you need only study the manners and customs, and mode of life of some of the present-day savage tribes, and compare them with your own. Many of these savages are now living under the same conditions as our own ancestors some 30,000 years ago.

That great and immortal man, Charles Darwin, who was the first to demonstrate the Law of Evolution, the greatest of all the Laws of God, described the *continual struggle for existence* which has always taken place, and how the *survival of the fittest* has continued to improve the race. This process has been called "Natural Selection." Anyone who has any doubts on the subject can, during his own lifetime, produce similar results by what is called Artificial Selection. If you take a pair of animals which multiply quickly and which produce several offspring at each gestation, you will soon notice that members of the litter are not all the same, that some of them are stronger than others, that some have better coats than others, some have slightly longer legs, or larger heads, or stronger jaws and bigger teeth, or more intelligence. According to the object you have in view, so do you select the next pair to breed from. After ten or a dozen years, it is possible by this process to produce a type which is in many respects quite different from the original parents. At first some of the offspring will revert to the original type of parents, but after a great number of generations, by weeding out those who do not conform to what is required, the new type becomes more or less fixed. Your success in producing this result will depend on what Darwin called variation. When breeding animals of established type, such as cattle,

horses, dogs, and even human beings, the offspring resemble the parents within certain limits, but every now and then an individual is born which varies in some essential point from its brothers and sisters. You may thus be able to breed quite a new type, and in quite a small number of generations.

An exactly similar process in evolution has been going on for millions of years by the process called *Natural Selection* and the *Survival of the Fittest*. The strongest individuals and those best suited to their surroundings or environment were those who survived. When amongst a species a variation occurred which was an advantage to the individual possessing it, he would be more likely to survive in the struggle for existence and also to leave a progeny, some of whom would inherit the same advantage, while the others would tend to die out. On the other hand if the variation in an individual produced an alteration that was a disadvantage to him, it would result in his type dying out instead of being perpetuated.

Under the changing conditions of the climate and surface of the earth in the past million years, revealed to us by the geologists, new types and species of animals were developed and progressed for many thousands of years, and then with the onset of glacial conditions, or the reverse, or competition with new types, a new environment was slowly formed, and the fixed and inelastic types were

destroyed because they were unable to adapt themselves, while those whose variations were suitable to the new conditions survived.

Thousands of skeletons of extinct reptiles have been found of great antiquity buried in the earth and covered over by subsequent changes on the earth's surface. So numerous were they in far-off ages, that geologists speak of the Reptile Era. Of these many thousands of varieties, but few have been able to survive until modern times. The birds of the present day are descended from one or more of the flying reptiles. A fossil showing an intermediate type was found at Solenhofen, Bavaria, of the upper Jurassic age. The wings were feathered, but still had claws at the end. The tail was like a lizard, and the beak still had some teeth. At present further research is necessary before it will be possible to trace the actual species of reptile from which they have originated. The eggs of the modern birds are similar to those of the reptiles, so also are the changes which take place in the egg during the first half of the incubation period.

The skeletons of the ancestors of nearly all the modern animals, including man, are found buried in the earth. We are thus able to trace the gradual development that has been going on for millions of years from the more primitive to the more highly specialized forms of modern times. The most complete of these biological pedigrees is that of the horse.

You can thus see that Evolution is not a theory, but an actual fact which can be demonstrated. All the connecting links for every species have not yet been found, but there are sufficient to prove the truth of Evolution.

All the more recent discoveries made by geologists of further skeletons of ancient man, and by physiologists on the working of the human body, confirm and strengthen in a wonderful way the views of Charles Darwin on the origin of man.

His opponents very often misstate what he said in order to throw dust in the eyes of the ignorant. Darwin never said that we are descended from monkeys. What he did say was that certain of the man-like apes and the human race had a common ancestor. None of the other monkeys have anything to do with the human race and are in no way connected with us or the man-like apes.

If you wish to realize how closely we are related to man apes, go to the Natural History Museum in London, and compare the skeleton of a gorilla with that of man. You will see at once that all the bones are exactly the same. The only difference you can find is in the relative proportions of the bones, which also exist between one man and another.

If you carry your investigations further, you will find that this similarity is not con-

finer to the skeleton only, but must be extended to the muscles, nerves, arteries, brain, internal organs, and even the appendix and the blood. Perhaps the most interesting discovery since the death of Darwin and the most conclusive that he was right in his views of the origin of man, is the fact that the blood of the man apes is exactly the same as human beings. The blood of all the other animals and all the monkeys, except the man apes, is different. This difference is not confined to the mere appearance of the blood under the microscope, but extends to its chemical reactions in the minutest particular. For instance, when a human being recovers from a disease caused by micro-organisms, certain subtle changes take place in his blood by which he is protected from further attacks of that disease. This applies to all the infective diseases, such as typhoid, cholera, smallpox, &c. So great has been the development of medical science in the last fifty years, that it is now possible by means of very delicate and complicated tests, to ascertain whether a human being has suffered from certain diseases, and whether he is proof against them; and in certain cases, when it is found that he is susceptible, it is possible by the use of vaccines to render him proof against them.

All these wonderful changes in the blood, discovered after a stupendous amount of work by the men of genius in the medical pro-

fession, are found also to occur in the blood of the man apes and not in the blood of any other monkeys or animals. In other words, the man apes are not only exactly the same as we are in structure, but they are our actual blood relations. No greater confirmation of the truth of Darwin's work could be found than this, and it would have rejoiced the heart of that great man had he only lived to know it.

There is still further a large accumulation of evidence since the death of Charles Darwin which proves that his views on the origin of man are correct. We have known for a long time that man's body contained vestigial remains of his former existence. The man apes are able to move their ears and adjust them to the direction from which a sound appears to come. The muscles by which these movements are brought about are present round the ears of every human being, and can be demonstrated on any dead body. The necessity for the use of these muscles in moving the ears has long gone by in the march of evolution, hence the absence of movements in the modern human ear. Some of these remains in our bodies of our former animal existence are a source of considerable danger to life. What is known as the appendix is a small canal closed at one end and opening into the commencement of the large intestine. It is of no use whatever

to the human body, and is liable to become the seat of disease and bacterial invasion, causing peritonitis and death. At some very remote time, millions of years ago, it was an organ concerned in the digestion of cellulose. With the evolution and development of the human body, its function has ceased to be of any value, and its removal by the surgeon improves the health of those who lose it.

Although the man apes to whom we are related have no tails, they have the remains of a tail. This can be seen in their skeletons in the form of a small line of bones tapering to a point at the end of the spinal column. The remains of an exactly similar tail can be found in the skeleton of every man and woman. Like the appendix, it has not only ceased to be of any use, but in some cases is a source of trouble to the individual. Projecting slightly inwards instead of outwards, it is liable to damage in women during childbirth and has to be removed. There are numerous other vestigial remnants in man's body of his former animal existence, some of which will be touched upon in the chapter on the "Relation of the Sexes."

A further proof of Darwin's views that has been greatly developed since his death is found in the study of embryology, that is the growth of living organisms from the time of impregnation in the egg, or in the womb, until birth.

Let us consider the group of animals to which man belongs. Those who suckle their young, called the Mammalia (from Latin *mamma*, a breast). In all these animals, if you were to examine the ovum before impregnation, you would find an exactly similar cell. When the ovum is impregnated, you would find that in all these animals, man included, the first changes in the development of the ovum into a living animal are exactly the same. As the ovum develops, it is called an embryo. The gradual changes which it goes through before becoming differentiated into the various types of animals, indicate its ancestral origin. In fact, we may say that the embryo of every animal gives evidence of its line of evolution from the remote past, millions of years ago, to the present time.

Such being the case, we should expect, if Darwin was right in his views, to find a considerable similarity between the embryo of the man ape and the human being. That is exactly what we do find. In the first place, the placenta (called in popular language the "afterbirth") is of the same discoid shape, and there is the same arrangement of the cord which connects the future child (called a foetus) to the placenta. These two characteristics are not found in the other monkeys, but only in human beings and the man apes. Still more striking is the resemblance between the unborn ape and the human foetus. Up to

the end of the first three months of pregnancy, it is almost impossible to distinguish one from the other.

Further evidence showing the truth of Darwin's views on the origin of man has come to light since his death, in the shape of several skeletons of ancient men. If you wish to realize how very ancient some of these skeletons are, you must understand something of the principles of geology. It was Charles Lyell who first arrived at a correct solution of these principles. His views are now accepted by all scientific men. He showed us that the earth is undergoing evolution like everything else. That the surface of the earth is continually changing. You can perhaps realize this better when you hear that the floor of a Roman villa has been found buried some feet under the present surface, although it is only a little more than a thousand years since the Romans left Britain. Various agencies bring about changes in the earth's strata. The atmosphere containing carbonic acid acts on limestone causing it to crumble away, oxygen acts on stone containing iron. The moisture in the air gets into the little crevices in rocks and softens them. Every shower of rain falling on stone removes a very small amount of the surface. You have only to examine the stone of any old building to find flakes of it preparing to drop off. The greatest of

all agencies is water. Watch a mountain torrent as it thunders down a glen after heavy rain, note the colour of the water containing particles of earth, and listen to the grinding of the pebbles as the rapid stream carries them along. Look at the road as you walk along after a heavy rain; there will you see the grit churned from the surface, swept to the lower side by the heavy downpour.

When you have realized this, think of the changes that the mighty Amazon and other noble rivers are producing on the earth's surface, of the millions of tons they are carrying down on their bosoms from the mountain tops to the banks and estuaries of the low ground and also on to the floor of the sea.

Go to the East Coast of England: do you see that house trembling on the edge of the cliff, soon to be swallowed by the insatiable maw of the sea? Take a boat on a calm, clear day, and there below the surface of the water you can see what once was a village teeming with life on the surface of a fair land, and now for ever swept away. On the South Coast is a quaint old town, girt with stout walls, formerly lapped by the hungry waves for centuries. If those walls could talk, they would tell you of many a hard-won battle against the sea rovers, who brought their ships right up to them in attempts to storm the town.

Look again: where once were waves, the cattle now graze peacefully on the rich grass of the meadows, while the sea is miles away. Here then a new stratum has been laid down on the old bed of the bay in the last few hundred years, by the action of the sea.

If the fringes of the sea can produce such results, try to imagine what would happen when whole countries have been submerged. There is abundant evidence that Great Britain was under the sea for tens of thousands of years. The whole of the chalk downs and cliffs so familiar to everyone in our homeland is chiefly composed of the minute shells of marine organisms deposited during the period of submergence.

Frost is another important factor in producing disintegration of rocks. When water freezes it also expands. Wherever there are little cracks or crevices in rocks into which water can make its way, this expansion causes a further separation every winter. As soon as a thaw comes, some disintegration occurs and the process is repeated every season. You may be able better to realize this, if you allow the water that cools your motor engine to freeze. A cracked cylinder or radiator soon brings it home to you.

The avalanche as it thunders down the mountain side, carries with it a vast amount of debris, stones, and even small rocks, wearing away the surface and depositing

it on the floor of the nearest valley. Those huge glaciers which you so much admire in the mountainous regions of the earth, are slowly moving down to the lower levels, grinding, wearing, smoothing the rocks in their passage.

Icebergs frequently remove large pieces of rock and deposit them finally miles away when the ice melts.

In some parts of the world, where the climate is dry, considerable changes are produced by the action of the wind, particularly when it blows chiefly in one direction. You have heard of the sandstorm in the desert when hundreds and thousands of tons of sand are carried whirling through the air for long distances to form a new deposit in some different region.

The volcanic outcrop in different parts of the world, causing upheaval of the earth's surface and the ejection of huge quantities of matter, is another important factor in altering the surface of the earth. Great masses of molten lava roll down the sides of these volcanic mountains and bury everything they come across. Huge clouds of dust are vomited forth from the open crater in eruption and are carried many miles before falling to the surface of the earth to form a new stratum. So vast in quantity is this dust, that it sometimes buries whole cities. The Roman towns of Pompeii and Herculaneum, near Vesuvius, are instances of this action.

The organic causes dependent on animal and vegetable growth are very important. The coral reefs in the tropics, and the chalk hills in temperate climates, are a permanent monument to the activities of minute living organisms. Nor is the vegetable kingdom far behind. The whole of the coal measures are the remains of forests which once flourished on the surface of the earth before man was differentiated from the other animals millions of years ago. The great depth at which some of the coal measures are now found give you a good idea of the enormous changes that have taken place on the earth's surface since that time, when huge reptiles roamed through the gloomy depths of the coal forests.

The study of God's law of evolution in relation to the earth's surface by that great man Charles Lyell and others, has enabled them to classify the various layers found when cutting into the surface of the earth, and also to form an approximate opinion of the age of each layer. This knowledge has proved of great value in elucidating the history of ancient man. By this means we are able to form an approximate opinion of the date at which each of these ancient men lived in the long distant past. Since Darwin's death a large number of skeletons and human remains have been found of great antiquity, proving conclusively that his views on the origin of man

are correct. By a knowledge of the geological strata of the earth in which the skeletons are found, an approximate estimate of their age can be arrived at. If the Darwinian law of evolution is correct, we should expect to find that the older the remains of man, the more they would resemble the anthropoid apes. This is exactly what has been found. The three main factors in the higher development of man from his animal origin, have been in the remote past: *the assumption of the erect position instead of going on all-fours; an alteration in the hand with a greater mobility of the thumb; and an increase in the size of the brain.* These improvements are supposed to have been arrived at in the order given above.

Most important of all has been the increase in the size and quality of the brain. By comparing the skulls of ancient men, we find that the oldest are nearest to the animal, and the latest approach closely to that of modern men.

A study of the brains of some of the ancient men shows that they developed a large brain very early in their history, and that the acquisition of the higher qualities of reason, speech and reflection, came later. Those muscles of the tongue which are chiefly concerned in speech are fastened to that portion of the inner surface of the lower jaws which goes to form the chin. The continued and increased use

of these muscles brought about by the development of the powers of speech led to a corresponding increase in the thickness of the bone at this point and the subsequent formation of the modern chin.

There is still further evidence to support the great Darwin's statements on the origin of man. Under certain conditions, which will be fully described in Chapter III (p. 60), children instead of growing up to a standard equal to, or better than their parents, show signs of failing to reach the same level. This failure may be either physical or mental, or both may be combined in the same person. It is called *degeneration*. We should therefore expect that when human beings, instead of going forward, go back in their development, they would show some of the traits of their simian ancestors. This is exactly what happens. The forehead very often retreats, the chin remains undeveloped, or the ear resembles that of the chimpanzee; very often there are no lobes to them, sometimes they are too large, or they stick out almost at right angles to the head. The mental attributes are also liable to revert to former conditions. The social qualities, acquired late in man's history, which enable people to live together in communities without undue friction, are absent, and the person becomes a law unto himself, until the prison puts a temporary check on his activities. Some of the minor cases

of this mental degeneration take the form of mysticism and implicit faith in some stupid superstition, just as we find in the savages of the present day. A failure to reason correctly is very common, and the most absurd and false conclusions are arrived at. The emotional element may be unduly developed and lead to disastrous results. Many of these people find their way eventually to a lunatic asylum.

You have no doubt noticed that the human child has to learn to walk upright. The young of other animals, within a very short time of their birth, are able to move about in the same manner as their parents. The human child at first goes about on all-fours and has to be taught how to walk, thus affording another proof of the animal origin of man, and of a later change to the upright position.

You will now be able to understand how impossible it is to accept the Christian belief that man is made in the image of God. We have far too much reverence for the Great Almighty to imagine for a minute that he is made on the model of the anthropoid apes as we are ourselves. In fact, we may go further and say that it is a blasphemous idea in our opinion. What strikes one more than anything in this belief is the ineffable conceit of the Israelitish priests in making the statement, and still more the want of intelligence shown by some people in modern times in believing it. We can understand it better if we realize

that the Israelites were semi-savages, with barbarous ideas of human sacrifice, very similar to those held by the savages in Ashanti a few years ago. Still more preposterous was their delusion that they were the chosen people. To imagine that the Great Almighty who rules a hundred million worlds, would be capable of the human weakness of favouritism, shows how narrow and eaten up with vanity they must have been. You can understand now why in the struggle for existence, in contact with more intelligent nations, they were driven out of their land.

This belief in the origin of man, viz. : that he was made in the image of God, had the most deplorable effects during the first 1500 years of the Christian era. It was naturally considered impious to dissect the human body, and the progress of medical science came to a standstill. The whole of Europe was devastated by various epidemics from time to time. The amount of pain and suffering the human race underwent in those days is enough to make one shudder. After the Reformation, although the Protestant sects were almost as bigoted and quite as narrow-minded as the Papists, they were not united, and therefore were unable to oppose the light diffused by Rationalism. Intellectual progress became possible and the lamp of knowledge has continued to burn with increasing brilliance ever since.

If you accept the origin of man by Evolution through countless ages, you have to reject the idea of the special creation of a perfect man and his temptation and fall from grace. The two are incompatible. So far from having fallen from grace, man has risen from the animal state to a condition where he rules all the other animals. Some races have acquired a power of reasoning which has enabled them to reach high ideals undreamt of by early man; have learnt to discern the fallacies of superstition; to explain what ancient man thought were miracles; to send messages thousands of miles through air in a few seconds; to master the dangers of the sea; to play with disease in test-tubes and laugh at its impotency in their hands; to put down bigotry; to make the inquisitor tremble in his underground dungeons; to hurl the tyrant from his throne; to see justice done without fear or favour in many lands; to make six blades of wheat grow where one grew before, to make knowledge available to everybody, to raise the standard of living for the poor man; to give him a harbour of refuge when too old to work; to provide him with hospitals when he is ill, and a hundred other things beside.

Many people dislike the idea of their animal origin. Let them comfort themselves: but for evolution they would still be living in caves, eking out a miserable hand-to-mouth existence,

the victims of superstition, in abject fear of every shadow and every sound as soon as night fell. Think again of the hope held out for the future. Having risen from a condition of savagery and superstition, associated with human sacrifices, the burning of heretics at the stake—a form of tyranny where no man could call his life, or his property, his own—is it not almost certain that man will in time rise to a condition of perfection ?

CHAPTER II.

THE ANTIQUITY OF MAN.

IT is only possible within the limits of this chapter to give a short résumé of this subject. During the first eighteen hundred years of Christianity the Infallible Pope and the heads of other Christian sects taught that the earth was only 6,000 years old. The investigations of Rationalists have demonstrated the absurdity of this claim to infallibility, for we know now that the earth is many millions of years old, and the evidence in support of this is irrefutable.

In the first chapter I gave a short outline of the changes continually taking place on the earth's surface, by which the rocks are disintegrated and the soil is washed away and deposited in other places. Although this is hardly noticeable during the ephemeral span of a man's life, except to a good observer, the deposition continued for many millions of years amounts to hundreds of feet in depth. Some of the coal measures, which were primeval forests on the surface of the earth millions of years ago, are now buried in some places a thousand feet. The geologists who

have studied this subject have classified the different strata which have formed in the past, and by an examination of the present earth surface are able to give the age of the different layers. These, as they were deposited in former ages, have preserved some ancient remains of the animal and plant life of each age.

The seeker after truth thus finds unfolded before his eyes the evidence of the marvellous evolution of organic life progressing for millions of years, from the lowest to the highest, and culminating in the development of modern man. The story of the Creation in a few days, and of the fall of man, which has been taught for nearly 2,000 years, and is still taught and read out in our churches as if it were inspired, is now shown to be nothing but a fable. This is another example that the Pope's claim to infallibility is erroneous and childish.

Astronomers believe in the evolution and death of the stars throughout space. Our own earth was at one time a vast cloud of very hot gas, probably thrown off by the sun. As the heat was radiated into space, a contraction took place, and later a gradual solidification, until finally a thin crust was formed on the earth's surface. No doubt for many millions of years, until the solidification had extended to a considerable depth, the surface was very unstable, and there were frequent vast earth-

quakes and upheavals. How many millions of years this went on before the dawn of life we do not know, but in the lowest stratum, which is the bed of the primeval ocean, we find evidence of the earliest germs of life, in the shape of the amoebæ and foraminifera. They are of microscopic size, mostly invisible to the naked eye, and consisted of minute particles of protoplasm. It is estimated by those best qualified to judge, that the dawn of life dates back about forty million years. Above the primeval bed of the ocean come the Cambro Silurian deposits, chiefly of slates, crystalline, limestone, shales, sandstones, &c. There living organisms have progressed and become more complex. Sponges, corals, algæ, seaweeds and trilobites, and others are found. This period is estimated to have lasted about ten or twelve million years.

A further advance followed during what is now called the Devonian Age, when the old red sandstone was laid down. Many kinds of fully developed fishes and shellfish appeared during this period, lasting about six million years, and vegetation in the shape of the tree ferns has been evolved.

Above the former stratum we come upon the coal measures. On that account this period is called the Carboniferous Age, with a duration approximately some five to six million years. The tree ferns have developed into

huge trees. Various types of conifera are found in the forests. Amphibious animals exist and several reptiles on the land.

The following age, known as the Triassic and Jurassic, is also called the Reptilian Age, on account of the marvellous development of these animals. Thousands of skeletons have been found of all sizes and shapes, some of enormous size, but mostly with small heads and poor brain capacity. It is in this age that we find the ancestors of the modern birds in the flying reptile with membranous wings. During this six million years occurs the first appearance of mammals (animals that suckle their young)—a great advance in that man belongs to this group.

A shorter period of three million years covers what is called the Cretaceous Age, when the great chalk downs and cliffs, so characteristic in our beautiful England, were formed when the land was under the sea. They consist chiefly of minute marine shells. The great reptiles were still in existence, and had reached their maximum development and ceased to progress, with the exception of those that show evidence of the coming feathered wings of the modern birds.

As the strata begin to approach modern times a more minute division into epochs becomes necessary. The formation of the layer above the chalk, which is called the Eocene (the dawn of recent life), lasted about

one-and-a-half million years. As its name indicates, some of the animals that lived in this epoch are the remote ancestors of those we see about us. The mastodon, the eohippus, from whom the horse evolved, the giant sloth, the mesopithecus, or first ape, the mammoth, a hairy form of elephant, and the sabre-toothed tiger and many others.

The Miocene stratum, just above the Eocene, is not present in these islands.

The Pliocene (the newer stratum) follows with a duration of one million years. Several of the mammals of the Eocene epoch survived, and in addition appear the hipparion, or three-toed horse, the ape, the giant sloth, the hippopotamus, the elephant, and several others, and some of the modern trees and vegetation.

Further exploration will some day also reveal to us the more primitive simian ancestors of man, in addition to the man apes that have been found.

We have now arrived within six hundred thousand to a million years of modern times; it is at this date, just at the end of the Pliocene, that the earliest skeleton of man has been found.

It will be best to describe ancient man more from the evidence of his culture as shown by flint implements, which are much more common than his skeletons, and also in his relation to the various glaciations. The more recent strata will be mentioned as they come

Before proceeding to do this, it is worth while to point out the significance of the remains found in the various strata already described. You have no doubt noticed that the lowest and oldest stratum contains the smallest and simplest forms of life. That as you ascend the ladder, so do the forms of life continue to develop, until in the Pliocene stratum are found the most complex animals in existence, and some of them the ancestors of our modern animals. A more careful examination shows that certain types died out, while others became modified to suit their changed conditions of life. By a careful examination of the bones of certain animals during long epochs of time, the gradual changes in the skeleton can be seen from a very remote period, hundreds of thousands of years ago, down to the present day.

Even if no great man of genius like Darwin had appeared to explain to us God's law of Evolution, the mere evidence shown by fossil remains, of the gradual development of forms of life from the simplest to the higher complex, would almost suggest to you some such law as that of Evolution must be in existence.

In regard to the age of the earth and the time which has elapsed since the first rocks were formed, there are various opinions. We are all agreed that it has taken many millions of years. The estimates given of the time taken in the formation of the different strata

are those given by the late Alfred Russel Wallace who, with Darwin, proclaimed the law of Evolution. There are many who think that instead of forty million years, more like seven hundred million years have elapsed since the earliest rocks were formed. The discovery of radium has quite upset all the previous calculations of the physicists, based on the cooling of the earth from its incandescent state, because radium gives out heat. Any calculations based on the cooling of the earth are now found to be estimated on erroneous data. In the present state of our knowledge, the question must to a certain extent remain open until we have more facts to go upon. This also applies to the deposits which follow on from the Pliocene to the present day in which early man has been found. In trying to give a general survey of this period, I shall follow the estimates given by Geikie and Penck.

In 1894, Dr. Dubois described some fossil bones of a human character found near the hamlet of Trinil on the east bank of the River Bengwan in Java. In the same layer were found bones of twenty-seven different animals, mostly of extinct species, which are known to belong to the Pliocene and Pleistocene (the stratum that came after the Pliocene and contained still more shells of modern type). These remains consisted of the vault of a skull, a left thigh-bone and a few teeth. The

poise of the body determines the shape of the thigh-bone in man and the apes. From the bone that was found anatomists are able to say that this individual was able to walk upright, and that his height was about 5 ft. 8 in. The teeth resemble in many respects human teeth, although they still retained the wide separation of the roots existing in anthropoid apes. The head is long, like most of the very early races, the forehead is narrow, low and receding; just above the hollows for the eyes is a ridge of bone called the supra-orbital ridge, which is found in all man apes, and which was very marked in another of the early races of men called the Neanderthal (to be described later). The brain capacity is much higher than that of the man apes, but much lower than modern man. The mean capacity of the brain of male gorillas is 518 c.c., of the Java man 850 c.c., of the modern human races 1,300 to 1,500 c.c. That portion of the brain which is concerned with speech was, in the opinion of Sir Arthur Keith, more developed than in the apes, but very far behind modern man. The same condition also applies to the higher association areas of the brain which are characteristic of modern man.

Altogether this man who lived some five to six hundred thousand years ago, is very much what we expected to find from Darwin's revelation. The Java man is, in fact, one of the missing links in the evolution of man.

In both Suffolk and Norfolk in England, the earliest types of flint implements have been found in the stratum known as the Pliocene, and therefore of the same age as the Java man. These flints are of a peculiar shape, described by Ray Lankester as rostro-carinate, or eagle's beaks, and were used for various purposes, and as scrapers, hammers and one-sided picks. We are indebted to Moir for finding these crag implements, and to Ray Lankester for a most able description and interpretation of their meaning. 2,933

During the formation of what is called the Pleistocene stratum, great changes took place in the climate of the earth. Geologists have discovered evidence of no less than four glaciations, when the permanent snow line gradually crept down from the Arctic regions, over northern latitudes, both of Europe and America, and probably Asia too, until it reached as far south as Berlin, and also covered Scotland, and about two-thirds of England. Each of these glaciations is estimated to have lasted about twenty-five thousand years. In between, there were long periods of mild weather, when snow and ice receded again to the line of the present Arctic regions. These periods are called Interglacial Periods.

The most likely causes of the changes in climate were either an alteration in the obliquity of the earth, or an alteration in the orbit of the earth round the sun. Whatever

the cause, the alteration probably helped on the evolution of man, by increasing the stringency of competition. It was more difficult for him to find a living in a cold climate, and as the snow line crept slowly and relentlessly down over his former hunting grounds, he was driven south to invade his neighbours' lands and fight to death for supremacy, or benumbed by the cold and exhausted by want of food, he sank down into the sleep which knows no waking.

That this is no fancy picture you will better understand if you realize that each man who lives by hunting alone, requires on an average at least fifty square miles to furnish him enough food to subsist.

The evidences which have revealed these glacial periods to the geologist, consist chiefly of the effects produced by the cold on vegetation, either destroying it, or changing it into those plants and trees that are able to subsist in a cold climate; by the alteration in animal life, and by the action of the glaciers, grinding down the surface of the rocks, and transporting portions into districts alien to them in character. It is estimated by Penck that the present snow line on the Alps in Switzerland came down 4,000 feet.

There were also great changes in the land surfaces, in the shape of subsidence during glacial periods and elevation in the interglacial. The continual accumulation of snow

and ice going on for thousands of years, with its enormous weight, was probably the chief factor in causing subsidence.

The first glaciation is known as the Gunz. So far, no actual bones of man have been discovered belonging to this period. But there is ample evidence of his existence, in the shape of roughly worked flints. Rutot, who has made a profound study of these extremely ancient and primitive flint implements, has classified them under three heads: The Reutelian, from Reutel, Ypres, Flanders; the Mafflean, from Maffle, near Ath, Hannregan; the Mesvinian, from Mesvin, near Mons, Belgium.

The retreat of the ice and snow after the first glaciation was followed by a long period of warm weather, lasting about one hundred thousand years. Judging by the remains of the plants and animals that flourished, the climate of Europe was a little warmer than it is now. A great many plants and trees that had flourished before the first glaciation, and also some of the animals, are found to have disappeared.

The deposit known as the forest bed of Cromer, characteristic of this first warm period, abounds in trees of the same species, as we now find in that district at the present time.

Perhaps the best examples of plant and animal life are found at St. Prest, near Paris.

For this reason, this warm, or first interglacial period, is called St. Prestien. Many large animals, now extinct, flourished in Europe and England, such as the southern mammoth, Steno's horse, the Etruscan rhinoceros, the giant hippopotamus, the giant beaver, and others.

When the enormous weight caused by the accumulation of ice and snow for twenty-five thousand years had been dissolved by the onset of warm weather, a rise of the land surface of Europe took place. In the Mediterranean it amounted to as much as 300 ft. Africa was joined on to Europe by a land bridge at Gibraltar, and also via Sicily and Italy. The whole of the North Sea, the English Channel, the Irish Channel, and part of the Atlantic Ocean, to the west of Great Britain, were dry land. The remains of the forests that filled these valleys are still preserved to this day, and are occasionally brought to the surface by trawlers.

In 1907, near Heidelberg, a human lower jaw-bone was discovered 70 feet below the present land surface. It was lying in the sands of an ancient river, and associated with it in the same layer, known as the Mauer sands, were found the fossil bones of the Etruscan rhinoceros, the ancient elephant, the Mosbach horse, the primitive ox, and other animals which have now ceased to exist.

The great strength and massiveness of this jaw suggested at first a simian (man ape) origin, but fortunately all the teeth were present, and these served to differentiate it, and demonstrate its connection to the human species. There is no chin; the shape of the jaw and the absence of bony points for the attachment of the muscles used in speech showed that faculty to be in a very rudimentary condition, if it existed at all.

In 1912 Charles Dawson described some bones of a skull which he had discovered at Piltdown, in Sussex, England. Lying in a dark gravel bed of great antiquity, which had formed part of the bed of the ancient Ouse, they were found to be associated with some primitive flints, worked on one side, and also with the bones of the mastodon, the southern mammoth, the hippopotamus, and others. The bones of these extinct animals are supposed to have drifted down and been deposited by water action. They probably belong to an earlier age than the human remains. The exact age of the latter cannot at present be determined. Some geologists would place them earlier than the First Interglacial Period, and some later.

The present Ouse is now 80 feet lower than it was when the gravel was formed. In other words, the Ouse in the time that elapsed since the Piltdown man lived, has cut through 80 feet of rock, &c., and left its former bed high and dry on the Piltdown plateau.

The chief points about this interesting skull after it had been restored by the leading anatomists of the day, were as follows: Compared with a modern man, the general shape of the head is rather longer and a little flattened on the top. The forehead shows a great improvement on the Java man, and is not much behind modern man. The bones of the skull are twice as thick; the size of the brain rather smaller than the average modern man. The convolutions of the brain are much the same, with the exception of that concerned in speech, which is only partly developed. The lower jaw is very strong and massive, without a chin, resembling in shape that of a man ape, but the character of the teeth shows a human origin.

On the whole this very ancient skull might well be one of the prehistoric ancestors of modern man, and provides a missing link in the descent of man, described by Charles Darwin, from a common ancestor of man and the man apes. Professor Rutot has studied the flints of this period and described them under the title of Mesvinian culture.

The second glaciation, called the Mindel, lasted, like the first, some twenty-five thousand years. It extended over the northern half of Europe and America, coming down as far south as the Thames, in England. The cold was more severe than that of any of the other glaciations. There were huge glaciers

on the Pyrenees, and in the Rhône valley. The whole of Scandinavia was one vast ice-field and extended into the valleys of the Rhine, the Elbe and the Vistula. In America the ice cap descended as far south as Iowa, Nebraska, Missouri and Kansas. No doubt the climates of Italy, the whole Southern Europe and North Africa, including Egypt and Asia Minor, were much cooler than they are now. In fact, we may assume that the climate of North Africa was not very different from what Austria is to-day.

The Second Interglacial Period is supposed to have lasted longer than the first and extended to 150,000 years. We know that the ancient elephant, the Etruscan rhinoceros, Mosbach horse, primitive bison, primitive ox, the lion, the wild cat, and others flourished at this period. Judging by the remains of the vegetation, the climate was rather warmer than it is now. In the North are found for the first time some remains of the reindeer.

So far, no skeletons of men have been found in this period, if, as we believe, the Heidelberg and Piltdown men lived in the First Interglacial Period. But we have no reason to doubt that their descendants, and perhaps other types of men, roamed over the land now covered with the cities of civilized life. There is ample evidence of man's presence in the shape of numerous flints. These are generally described as Chellean, from the place

named Chelles-sur-Marne, France, where the most typical forms of this kind of flint industry are to be found.

The men of the Chellean period appear to have chosen those shapes from a shattered flint which most resembled what they required, and then to have roughly worked on it and improved it. In this manner they improvised rough scrapers, axes, saws, chisels. The most typical of their weapons has been called the "coup de poing," about 4 to 9 in. in length, pointed at one end, thick at the other, where it was shaped to fit the palm of the hand.

Many thousands of years later, a gradual improvement in this flint industry took place. We can trace how struggling man slowly but surely evolved into a more intelligent being.

At St. Acheul, near Amiens, France, a large number of shaped flints have been found, which show an advance on the Chellean patterns, and also a greater variety of designs. For this reason the industry has been called the Acheulean. At Chelles you will find the Acheulean type in a later stratum than those designated as Chellean.

Most of the Acheulean men preferred an open life on the plateaus between or near rivers; the exception to this is found in the grotto of Castillo Puente Viesgo, Santander, Spain. The deposits, amounting to 45 ft. in this grotto, give us a record of the various

phases of man's existence from Acheulean times down to the Bronze Age.

One great advance achieved by Acheulean man of the early or warm period was the use of fire. Of this there is positive evidence in the remains of charred wood and bones associated with the flints of this period.

It is usual to speak of two Acheulean industries in flint: the first already described during the warm interglacial period, was followed by the second Acheulean period, when the climate again began to get colder. The workmanship of the latter, as we might expect from the law of evolution, showed considerable progress, and was no doubt stimulated by increased competition, caused by the gradual onset of cold weather. The vegetation would become less luxuriant and less able to support the animals and fruits from which man derived his food. From the large number of Acheulean flints found we know that the men of that time had spread over the whole of Western Europe, including England.

The Third Glacial Period was not quite so severe as the second, and lasted about 20,000 years, including the invasion and retreat of the icefields. It is generally called the Riss glaciation. In England the permanent snow line did not extend further south than the Midlands. In America it came down to Illinois. Two new animals appeared at this time in Europe—the woolly

mammoth and the woolly rhinoceros. The reindeer came further south and followed the cold weather.

The men of this period had to protect themselves against the cold, and we find their remains more in caves than plateaus. The typical example of this is found at the cave of Le Moustier, on the right bank of the river Vézère. In modern times this river lies 90 feet below the cave, having worn its way through the different strata during the tens of thousands of years that have intervened.

The flint industry of this period is therefore called the Mousterian, and consists of smaller flakes than the Acheulean. There are many scrapers for the preparation of skins. These scrapers, as a rule, were trimmed on one side only. The large "coup de poing" stones were not so common, but their shape showed a continuous and progressive skill, and also indicated that the Mousterian man was of the same race as the Acheulean.

The Third Interglacial Period of warm weather is estimated by Penck to have commenced about 100,000 years ago, and to have lasted about 50,000 years. The flint industry of man during this prolonged period showed little, if any, advance, and may be said to have continued to be Mousterian in character.

The fossil bones of animals show that the same types roamed over both France and England, so we may presume both countries

were still joined together by land surface, where now Britannia proudly rules the waves.

So far no skeletons of this period have been found in England. France and Germany have been more fortunate. In 1857, in the valley of the Düssel, near Düsseldorf on the Rhine, a cave was found on the face of a limestone cliff, 60 feet above the river, and 100 feet from the top of the cliff; within the cave were the remains of a human being, now known as Neanderthal. This man, who was very ape-like in many of his characteristics, has since been found to represent a race of men widely spread over Europe during this remote period and also at a much earlier date. Altogether, some twenty-five skeletons, or portions of skeletons, have been found of this type, associated with the different phases of the Mousterian flint industry and earlier. The most important finds were those of Neanderthal, Spy, Krapina, Le Moustier, La Chapelle, La Ferrassie and Gibraltar.

Compared with a modern man, we find just those differences which we should expect if we realize that the law of evolution is an absolute fact. In other words, Neanderthal man, at that remote age, was more like the ape than we are. In stature he rarely exceeded 5 ft. 4 in., and was often shorter. His neck was thick and short, and the head projected forwards, lacking the graceful poise of the modern man. The chest was broad

and deep, with powerful shoulders, the arms were not long, showing that Neanderthal man did not lead an arboreal existence. The shin-bone was short in comparison to the thigh. The knee-joint was not perfected, thus preventing the leg from being quite straightened on standing. The hands were very strong and large, but the movements of the thumb were limited, and lacked the delicate play found in modern man. The head was longer and flattened on the top, the forehead retreated. Under the eyebrows was a thick horizontal ridge of bone, similar to the chimpanzee; the eyes were wide apart, the face long and projecting forwards where the two jaws met. The lower jaw was massive. The teeth in some respects were different from the man apes and also from modern man. The brain of many of these ancient men, in spite of the ape-like face and body, equalled in weight that of modern man. But that portion of the brain, behind the forehead, which is concerned in the higher processes of reason, thought, association of ideas and imagination, was nothing like so developed as in modern man. The faculty of speech was also rudimentary, according to our standards. The chin, which is the result of the action of muscles of the mouth concerned in speech in modern man, was absent, or rather showed only a slight beginning.

A comparison of the skulls of Neanderthal

men of different periods, showed a slow but progressive improvement in weight of brain, and of skill in shaping flints. These later men also buried their dead, and discovered the use of fire.

By the time that the fourth glaciation commenced, they came into competition with a superior race, and appear to have died out, for after that date none of their skeletons have been found. A result we might have expected. In modern times we have seen the same result follow from competition with the white man, in the case of the Incas of Peru, the Aztecs of Mexico, the Red Indians of North America, and the aborigines of Tasmania and Australia, and others besides. Evolution has doomed the inferior races to die out in the presence of a superior race, if the climate is suitable to both, but not otherwise.

With the dying out of the Neanderthal men, and the invasion from the South of Europe by the superior Cro-Magnon race, a great advance took place in the culture of flint instruments, and also by the use of bone for various purposes. The most typical forms of these were found in the grotto of Aurignac, Haute-Garonne, France. Hence this phase of human culture is called Aurignacian. Among the flints are a great number of tools for graving, coinciding with the gradual retreat of the icefields, which first saw the dawn of

Art. On the cavern walls of the Font-de-Gaume, Dordogne, and also in other caverns, are to be found well executed painted outlines of the animals then living, such as the cave bear, the reindeer, wild cattle, &c.

Some forty skeletons, or portions of skeletons, have been found of what is called the Cro-Magnon race of men, in Syria, Italy, Spain, France, and one example in England, in the Paviland cave, Wales. It is supposed that this race originated in Asia Minor and spread along the shores of the Mediterranean, and thence over Europe. They are named after the cave of Cro-Magnon, near Les Eyzies, on the Vézère, where five skeletons were accidentally discovered during the making of a road.

Tall, averaging over 6 ft., with fine limbs and chest, and good shaped heads, this fine race could be considered almost the equal of modern men. The face was extra broad over the cheek bones, about the same length as modern man, the lower jaw more massive, projecting forwards a little more, the chin well developed. The head was large with well developed forehead and long shaped. The brain in actual weight equalled, or even exceeded the average of modern man. The Cro-Magnon man with his long head probably lacked some important mental quality necessary for general survival, which is present in modern man with his shorter

and broader head. A few of this ancient race, modified by time, may still be found in isolated parts of the world.

Contemporary with these tall men was another type found in the shelter at Combe Capelle, near Montferrand, Perigord, and called the Aurignacian man. Height about 5 ft. 3 in. Long narrow skull, fairly good forehead, chin developed, lower jaw small, face neither narrow nor projecting forwards. Indeed, very like a modern man, except for a long narrow head and brain. Other remains resembling this type were found at Galley Hill, near London, and also at Brünn, Moravia.

Two specimens of another type of man belonging to the early Aurignacian period were found in the cave of Grimaldi, near Mentone, but, so far, no others. This will not surprise you when you know that they were short and far more ape-like in structure than the Cro-Magnon, and therefore less likely to survive in competition with them. In some respects the Grimaldi man resembled the negroid type.

The men of this period probably had some belief in a future existence of the soul, because we find the dead were carefully buried, and that ornaments, weapons, and even food, were placed in the graves, while the body itself was painted with colour, presumably the same as that used for living people.

With the advent of warmer weather, nearing the end of the fourth glaciation, about 20,000 years ago, a further development of the flint industry took place, known as the Solutrean, from an open-air encampment at Solutre, Saône-et-Loire, France.

Here were found some fine so-called laurel and willow-leaf lance heads of beautiful workmanship. This great improvement was achieved by chipping off small flakes of flint by pressure instead of by a blow. Judging by the large number of horse bones, these animals must have been a favourite article of diet, and the reindeer also, but not to the same extent. Sculpture in stone and engraving on bone were actually carried on. For the first time a bone needle was found with perforated eye for thread. The value of the barb in holding a weapon in the flesh was discovered.

The mammoth, the rhinoceros, the lion, the leopard, and several other animals, roamed over Europe at this time.

The next industry is named the Magdalenian from the rock shelter of La Madeleine, on the right bank of the river Vézère, France, where the most characteristic examples of the work of the men of this epoch have been found. Experts, judging by the various deposits covering the implements of the period, think that this period began about eighteen to sixteen thousand years ago. One of the chief advances was the substitution of bone implements for

the chase and for domestic use, in place of flint.

Of these there are innumerable specimens, mostly made out of reindeer horn and ivory. Small flint flakes have been found, which suggest arrow heads, but no real evidence of the bow and arrow as yet.

The most prominent characteristic of this age is the extraordinary development of artistic skill. On the walls of the caves of Altmira, Maroulas, Niaux, and Font de Gaume, are drawings, painted in several colours, of the bison, the ox, the horse, the deer, and the wolf, which would not disgrace a modern artist. Some of the drawings of groups of deer show that these ancient men had a quite good idea of impressionism.

During this industry (the Magdalenian) another cold cycle, or minor glaciation, occurred. This minor glaciation is known as the Buhl stage. It has been found that the descent of the snow line in the Alps was only 2,700 feet instead of 4,000 feet during the great glaciations. The cold weather did not last more than a fraction of the time occupied by the great glaciations. Soon after the onset of warm weather, another period of cold again took place. The descent of the snow line in the Alps this time amounted to 1,800 feet, and is known as the Gschnitz stage. These alterations in climate can be proved, not only by the evidence of the action of snow and ice,

but also by the remains found in different layers of the plants and animals which could only flourish in cold and other climates.

The remains of no less than thirty-six individuals have been found in Europe belonging to this period. The two complete skeletons found at Obercassel, in Germany, are distinctly of the Cro-Magnon type, although they were shorter than usual. This was probably brought about by the colder climate and scarcity of food.

We have now arrived at what may be called the close of the Old Stone Age (Palæolithic). Then follows what is called the transition stage to the Neolithic Age (New Stone Age), the latter characterized by the perfection of stone implements, not only in shape, but also by the polishing of the flints so that a smooth surface was attained. The commencement of the Neolithic Age in Europe brings us down to within seven to ten thousand years of our present time of the Great War. While the New Stone Age was developing in Europe, civilization was beginning to dawn on the Nile and the Euphrates, and the first monuments to form the historical period were being erected. A considerable subsidence of the land took place a little before, or about, this time. The Irish and the English Channels are supposed to have been formed, and the present contours of Northern Europe.

If we now take a general survey of the

ancient men of Europe, whose existence lasted for hundreds of thousands of years, before ancient Egypt was even a kingdom, we find two main races, the Neanderthal, which died out, followed by a superior race, the Cro-Magnon, which again almost died out in the presence of new races. The men with broad heads gradually displaced the long heads. These men with broad heads showed no artistic tendencies, and yet they survived in the struggle for existence. Probably they were more inventive, and therefore able to progress. The invention of the bow and arrow may have been the deciding factor, or the accumulation of capital in the shape of crops and herds of domesticated animals, enabled them to continue a war when their opponents were starving. In spite of the large brain and well-formed head of the Cro-Magnon race, they appear to have been quite ignorant of agriculture, of the rearing of domestic animals (except the dog), of the arts of spinning and weaving, and of the manufacture of pottery, and yet they were highly artistic. In this respect they resemble the modern bushmen of South Africa.

Europe cannot be looked upon as the cradle of modern races. Further investigation will probably show that the earliest evolution of human beings took place in some part of Asia, which during the Glacial Epoch enjoyed a temperate climate. While ten thousand years

ago, and also until recent centuries, the men of Asia took the lead and invaded Europe, we, their descendants, now invade Asia and teach them good government. This change has come about in the last four to five hundred years, in fact only since Rationalism advanced and superstition retreated in Western Europe. The Eastern nations are still hampered in the march of Evolution by their various religious dogmas (see Chapter VII); we might almost say that some of them have been brought to a standstill. The advance of Rationalism has given greater freedom and liberty to the Western nations of Europe and thereby helped on their evolution and development to a degree undreamt of in the Middle Ages.

This short account of the great antiquity of man enables you to realize that the discoveries of further remains of ancient men, long after the death of Charles Darwin, have all of them served to confirm his wonderful doctrine of the Evolution of Man. How very foolish would some of the so-called lights of the Victorian era, who scoffed at Darwin, now look in the presence of all the facts recently discovered in support of his great message to humanity.

CHAPTER III.

EVOLUTION AND HEREDITY.

HEREDITY is evident to everyone except those who are deficient in intelligence. You have no doubt observed that the offspring takes after the parents throughout the whole of Nature, from the flea to the elephant. There are several varieties of aphides, the green fly which infests roses, the black aphid which infests the peach tree in a cool greenhouse, and several others. The offspring takes after the parents, each variety remains separate. Among all living things, heredity is one of the greatest of forces at work. There would be no difference between one race of men and another were it not for heredity. The white people produce white children, the black people black children, the yellow people yellow children, the savage races savage children, and so on. It is hardly necessary to point out this to any intelligent person. In spite of it you will come across stupid people who will tell you they do not believe in heredity.

Cattle breed cattle, but in addition the calves take after the peculiar points of each

breed of cattle. The Shorthorn, the Holstein, the Jersey, &c. The same thing applies to all the hundreds of varieties of birds, beasts and fishes.

Evolution would be impossible without heredity, and it would also be impossible if heredity were too rigid. The slight variations from the parental type are inherited again by some of the children. If these survive in the struggle for existence, and the process is repeated, a new variety, or even a new species, will be developed after some thousands of years.

Like all the other laws of the Deity which govern our existence, those of heredity are highly complicated. At the present time we have arrived at some conclusions on the subject, but there are still many points which have to be further elucidated.

In order to understand how heredity comes into play you must try to realize to a certain extent how the offspring first begins its new existence. In the simplest form of life, from which we are supposed to have sprung some millions of years ago, a single protoplasmic cell divides into two halves, and each half grows into a perfect cell.

The new cells are exactly like the parent in every respect. Under these conditions, heredity is perfect. When the conditions of life for the single cell organisms are perfect they may be said to be immortal, as there is no death of

any part of them. Although propagation may go on for a long time and hundreds of new cells be formed from one single cell merely by the simple division of each into two daughter cells, there comes a time when their vitality seems to flag. This is remedied by the union of two cells into one, a reverse process to what had previously taken place. This union appears to revitalize the organisms, and again multiplication by simple division can go on for many generations with success. This union of the two cells may be said to be the beginning of sex. A little higher in the scale a more complicated single cell organism, called the *Coccidium schubergi*, which occurs as a parasite in the intestines of a centipede, exhibits a well-marked difference between the two cells that unite together. After many generations have been formed merely by cell division, as in the former cases, a change occurs. One of the cells grows into a large oval body, filled with nutriment, with hardly any power of movement, while a similar cell develops into several long, slender bodies, capable of moving with great activity. The latter seek out the former, and unite with them to form new generations.

Here we have a very early stage of organic life, the formation of the two sexes. The female passive, but loaded with nutriment for the new life, and the small, active male cell seeking out its mate and uniting with it.

This is exactly what happens with human beings. After conjugation of two human bodies the released male cells called sperm cells remain in the female and commence at once to find their way along the cavity of the womb, and then along the narrow passage of the Fallopian tube until they reach the ovary, where they unite with an ovum, if one is ripe ; if not, they remain on the ovary until an ovum is protruded. The fertilized ovum begins to divide, and continues to divide and form new cells until eventually a complete child is formed. At quite an early stage in the growth of the ovum one very important event takes place which has a great bearing on heredity. Some of the earliest cells formed are set apart to act as sperm cells, or ova, to carry on the next generation. You will now be able to realize why it is that acquired characters are not inherited. For instance, the Chinese women have been compressing their feet for thousands of years, but the result is never inherited. Circumcision has been practised by the Jews for thousands of years, but the operation has to be repeated on every generation. The great development of the blacksmith's arm is not inherited by his sons. If a man loses one of his legs his children still have two legs. It sometimes happens that the cord which unites the afterbirth to the child within its mother's womb becomes twisted round one of the limbs, so that the

child is born with only a stump of one limb, or of both limbs, or of them all. Under these circumstances, if the deformed child grows up and has children, the latter will not be deformed, because the ovum had the capacity to form all the limbs complete, and set aside some of its cells for the next generation with a similar capacity. The deformity in these cases is acquired through a mechanical misplacement of the cord, and is not due to any fault in the germ cells. Many people are under the impression that the effects of education on the brain are inherited; all the evidence we have is against this. No doubt education properly applied, and not overdone, does strengthen the brain, but there is no more reason to think that this is inherited than there is to think that the strengthening of the blacksmith's arm by exercise is inherited. That the latter does not occur can be easily demonstrated. At the same time it is, we think, quite possible if a function, say of the brain, is strengthened by exercise continued for thousands of years, some minute addition may be inherited, which after many hundreds of generations becomes an important factor in Evolution.

If, however, there is some defect in the germ cells (viz., the ovum or the sperm) which produces an ill-shaped or deformed limb in the child, the deformity will be inherited by some of the next generation. Under these circum-

stances the deformity is not acquired, but is innate.

These germ cells from which children are formed are dependent for nourishment on the blood in both men and women, and after conception the embryo is dependent entirely on the blood of the mother for its nourishment. Anything therefore which deteriorates the blood of either parent before conjugation, or of the mother after conception, will do harm to the child. Conversely, the better the health of the parents, the better will the germ cells be nourished and the better the health of the child.

You will now understand why it is that some alcoholics are sterile, while the others have degenerate children. A moderate amount of alcohol is consumed in the body like any other food, but in excess it remains unconsumed and then acts as a poison, not only to the germ cells, but to most of the cells in the body, particularly those of the nervous system. It is impossible to define what is a moderate amount. What to a big, strong, active man, living in the open air, would be a moderate dose, might to an anæmic clerk be a poisonous dose.

Wine in moderation, and particularly red wines, help the nutrition and improve the quality of the blood, because of the iron they contain in an organic form that is easily assimilable.

In addition to alcohol, anything that is a poison to the cells of the body damages the germ cells as well. This applies also to the toxins formed during an attack of infectious disease. If conjugation is postponed until complete recovery of general health, the germ cells will by then have also recovered and no ill results follow.

When a person recovers from an illness caused by one of the microbic diseases, such as typhoid, he is protected against a further attack, in most cases permanently, in any case for many years. This was until recently a puzzle to scientific medical men, but like many other of the complicated laws of the Deity, its elucidation was arrived at by hard study and the intelligence of men of genius. The chief factors in producing this immunity are changes in the blood. We might suppose that as the germ cells are nourished by this same blood, the children would inherit the immunity of the parent. They do not appear to do so, for they are liable to infection like the parent. What they do inherit is the capacity to resist the disease which was innate in the parent. From my own observations, I should also say that the child inherits a higher resisting power to a disease when the parents are immune to it.

One of the ascertained facts of heredity is that a quality may remain latent for one generation and come out in the next. In

some cases this latency of certain qualities occurs only in the females. Colour blindness is a very good example of this. Supposing a father suffers from it while his wife is free of it. If the couple have a large family of, say, six boys and six girls, some of the boys will inherit the disease. Some will be born free of it, and their descendants will remain free. Some of the girls will be born free of the disease apparently. In reality they are free, but their germ cells are not, and in the next generation some of the children of the girls will again have the disease. This principle applies probably to a great many qualities, but unless these qualities form a definite and concise entity easily recognized, like colour blindness, it is difficult to elucidate them.

When two human beings have children, the result is a blend of the two parents. This is very evident when a white man mates with a black woman, the children are all half-castes. This blending I look upon as one of the most important factors, next to variation, in the improvement of the human race (see chapter on Evolution and Sex Problems). This blending of qualities is not the same in every case. It may incline more to one parent than the other, and may also in features and figure recall one or other of the grandparents or great grandparents. An individual, whether man or woman, of exceptional vitality, strength, and energy of body and mind, is able

to impress its characteristics more on the offspring than the more feeble partner of the union. Galton estimates that children derive half their qualities from their parents, a quarter from the grandparents, an eighth from the great grandparents, and so on.

Mendel's laws on heredity in plants do not appear to apply to human beings. The experimental method, so valuable for finding out the facts of science, is not of so much value in relation to heredity, on account of the great length of time, amounting to thousands of years, required to work out any experiment, on the same scale as the laws of Nature. Some facts can easily be ascertained in this way, but there is always this difficulty: we may draw a wrong conclusion from an experiment because it was carried out under artificial conditions that would not obtain under natural conditions.

It has long been known that the marriage of near relations leads to deterioration. The reason for this is chiefly due to the fact that near relations often suffer from the same defects and these are much intensified in the children. On that account the marriage of first cousins should be prohibited. If human beings were all perfect, probably inbreeding would not do much harm. We find that healthy guinea-pigs may be inbred for a great number of generations without any deterioration. If the Garden of Eden fable is true, the

whole human race must be descended from the incestuous union of Adam's sons and daughters.

There is no objection whatever to a man marrying his deceased wife's sister, if they are of different families, because there is no blood relationship. The same applies to the widow who marries her deceased husband's brother. The opposition of the Churches to these unions is most extraordinary, because the Bible expressly orders men to marry their brother's widow, if the latter is without a child (Deuteronomy, chapter xxv, verse 5).

Disease does not appear to be inherited, if we except syphilis; what is inherited is the weakness of the constitution, which is unable to resist disease. When a nation has been exposed to any particular disease for hundreds of years, those who are unable to resist die out. This particularly applies to the tuberculosis of civilized nations. The vast majority of the people are proof against it. But when, as a consequence of the various causes already enumerated, children are born deficient in vitality, the disease is able to attack them. That is one of the reasons why so far, all attempts to stamp out tuberculosis have failed. It is quite possible these ailing and delicate children have a lowered quality of blood which is unable to form the new chemical combinations necessary to defend them against microbic infections.

The problem in regard to syphilis is different, the microbe itself (a spirilla) appears to be passed on from the parent to the child. As soon as the parent is cured, the next children cease to be affected. One can hardly say then that it is inherited, in that there is nothing innate in the germ plasma corresponding to the weakness of constitution inherited by those liable to tubercular infection.

Associated with the delicacy and feeble constitution of some children is a condition known as degeneracy or decadence. The word is used to denote an abnormal condition, chiefly of the nervous system, produced in the first instance by a failure of development in the child to equal the standard of the parents. Degeneracy is due to the same causes as lunacy, feeble-mindedness, and idiocy. Excessive drinking of alcohol, injury to the germ cells from any toxin circulating in blood from disease or from drugs, sexual immorality, overwork, unhealthy occupations or environments, are the chief causes.

Some observers lay great stress on environment as a cause of degeneration—in fact they consider it, if not the only, at least the most important, cause. The proof that this is not the case is that degeneration is almost as common among the upper classes, who have every advantage of the best environment. A large proportion of old families of position in the last five hundred years have died out

in the direct line through degeneration. In many cases there has not even been a relation left, and the family has absolutely ceased to exist.

Just as there are many grades of liability to disease and to lunacy, so also are there many grades of degeneracy from the man who rarely betrays it, to the confirmed criminal, utterly devoid of all moral sense, called a moral imbecile.

When instead of going forward or remaining stationary living beings go backwards and degenerate, they lose those qualities most recently attained in the evolution of man. One of the last of these are the social qualities which enable mankind to live in communities. The natural instinct of every *normal modern man* is to consider his neighbour as well as himself. No community can long exist without it. The same instinct is present even among the animals that live together in herds. This is one of the first qualities to disappear. Every degenerate is egotistical, considers he or she has the right, as they call it, "to lead their own lives" irrespective of the rest of the community.

In most degenerates there is distinct want of balance in the brain. Some of the mental faculties are undeveloped, while others are exaggerated. The moral qualities are often blunted, or even entirely absent. The sense of right and wrong is not fully developed.

The distinction between virtue and vice, good and evil, is not easily grasped. The ego may be unduly developed and associated with extreme vanity. There is a loss of control by the will over impulsiveness. The emotions are too easily excited by all kinds of stimuli that would leave normal men cold. Despondency, pessimism, and vague fears of unknown dangers are very common. Mental debility may be present; as a result most degenerates find it difficult to concentrate their attention on any subject which requires hard thinking. The instinct for art is strong, and takes a degenerate form with them, although they may show great talent. Owing to the weakness of the nervous system, they are subject to neurasthenia, and show a great disinclination to hard work or activity of any kind. The Nirvana of Buddhism has a great attraction for them. They rebel against all sorts of restrictions because they are lacking in self-control. There is one mental quality which is, perhaps, more distinctive of degeneration than anything else, and that is mysticism, especially in connection with religious subjects. We might well expect this, because mysticism engrosses the mind of savages, who are twenty thousand years behind us in development.

In this respect they form a link with numerous lunatics in our asylums, whose mysticism has entirely upset the balance of

their brains. Another symptom is a failure to reason correctly; to suffer from confusion of thought; to be prejudiced on certain points, and to refuse to alter an opinion even on the most convincing evidence that the opinion held is false. Our asylums are full of people suffering in an exaggerated degree from this mental weakness. You can find numbers of lunatics who will converse reasonably on all sorts of topics except one, and on that particular topic they refuse even to consider any other point of view than their own.

Memory is deficient in the feeble-minded; they are in consequence unable to profit by the results of experience.

It often happens that the sexual centres in the spinal cord are deranged. This can be easily traced in certain authors' books, who are unable to form a balanced view of the relation of the sexes. They will exaggerate female attractions, because they are unable to resist their sensual impulses.

The nerves supplying the eye are not infrequently abnormal. Sometimes the colour sense is absent and everything has a grey or drab effect; or the eye is unable to distinguish the delicate half tones and blending of colours and can only see the crude reds, blues and greens. If you go to an exhibition by some eccentric clique, you will often see pictures exhibiting these peculiarities. At the same time you will notice that the drawing and

perspective are much at fault, because it requires a certain amount of concentration and hard work to learn to draw correctly.

The same want of form is absent in degenerate music; the composer meanders along without any definite theme or idea in his head. His music, in fact, expresses the confusion of thought and muddle of ideas that usually reign in his brain. He very often prefers dissonance to harmony, instead of using the former as an occasional foil to the latter; or he writes nothing but sensual music which suggests sensual presentations to the mind; while there is an entire absence of any stimulation to the intellectual, heroic, and higher feelings in the listener. Let anyone who doubts this listen to Mozart for comparison, and notice how the purity and beauty of his music seem to stimulate in the personality of the listener only what is good and beautiful.

Another special sense often deranged is that of smell. The normal man dislikes bad smells. When he did not in the past, he was likely to die from diphtheria, typhoid, and other diseases. This instinct is often absent in degenerates, who rather like foul odours. Sometimes there is merely an abnormal desire for all scents, and sensual stimulation of the brain is produced by them.

The degenerate authors, artists, and musicians, have quite a large following, because

their works appeal to other degenerates, of which there is unfortunately a large number.

In addition to the defects of the nervous system, there are also physical defects, which may or may not be present. In the business and other affairs of life, it is a great advantage to be able to recognize a degenerate. This can be done at once when these physical defects are present, whereas it may take both time and considerable experience of a person to realize the want of balance in the nervous system.

Perhaps the most common of the physical defects is the malformation of the ear in the shape of an absence of the lobe. When this is the only defect, it is not very important. It generally indicates that the patient is variable and uncertain, and prejudiced on certain points. Most of the members of the *anti* societies belong to this group. They resent innovations and are unable to progress. A more serious condition is present when the upper and outer third of the ear is flat and comes to a point, instead of the rounded curve and involution of the edge which is present in the normal person. Sometimes the ears are fairly well formed, but are much too big and out of proportion, and instead of lying almost flat on the side of the head, project outwards, almost at a right angle.

It is interesting to note that the shape to which the ear reverts in decadents resembles

more closely that of the chimpanzee than the other man apes.

A retreating chin, such as you will find in prehistoric man before he attained the faculty of speech, and a retreating forehead, belonging to the same period of man's development, are serious signs of degeneration. Disproportion in the features of the face is common. It may be that the nose or the chin, or the jaw, is very large, while the other features are too small. Both sides of the face are not always symmetrical. Hare-lip, cleft palate, squint, and other failures of development occur.

The ranks of the anarchists, syndicalists, criminals and prostitutes are recruited almost entirely from degenerates.

Unfortunately degeneracy is inherited because it is brought about in the first instance by damage to the germ plasm from which the child is formed. If a degenerate marries a normal person, some, but not all, of the children will be degenerates. If two degenerates whose parents were normal have children, most of them will be degenerates, but not all. If two degenerates whose parents and grandparents were degenerates have children, probably all will be degenerates. Luckily for the race, there is a tendency for degenerates to die out, in spite of the fact that they breed easily. Epilepsy, lunacy, suicide, drugs and alcohol, account for a good many, while disease adds to the number in

a greater proportion than among normal persons.

When a variation takes place in man, that is to say, when a child, instead of resembling or falling below the standard of the parents, shows an improvement on them, or an alteration in mind or body that is an advantage to the race, it is due to some quality in the germ plasm and is therefore inherited. Some of the children of such a person inherit the variation. The number of subsequent descendants who survive and exhibit it will depend on two facts: the extent of the advantage for survival, and the stringency of competition.

Is there a law for the determination of sex? Why should one couple have mostly sons, while another has mostly daughters, and others an equal proportion of both? From my own observations I think there is a law produced by Evolution by which a balance is preserved between the two sexes. When either of the parents is much stronger than the other in vitality or strength of constitution, the stronger parent determines the sex. If it happens to be the mother who is the stronger, more sons are born. In the next generation, if the sons inherit their mother's vitality more daughters will be born to them than sons. In this way, both sexes inherit equally the vitality, brains and other qualities of their parents and grandparents.

On the same principle, when a man is a

husband to several women, he invariably has more sons than daughters. This is because the extra sexual demand on him lowers his vitality.

You can understand how very valuable this law has been in the past history of man when continued fighting has so considerably reduced the number of men that polygamy, either legal or illegal, followed. In a generation or two the number of each sex would again be equal.

If you observe people, you will notice that whenever the father is much stronger in constitution (size and muscular strength do not count) than the mother, the children are all girls, and vice-versa. Again, in war time, owing to the strain on the men and the lowering of their vitality, more boys are born than girls.

Under normal conditions, the number of male and female children born is about equal with a very slight excess of males.

In conclusion, there are four facts in heredity which stand out above the others.

(1) All living organisms closely resemble their parents and grandparents, but show slight variations.

(2) Characteristics acquired by the parents during life are not inherited, except acquired depreciation or improvement in health.

(3) If the parents are quite healthy, lead normal, healthy lives, and love one another,

the tendency is for the children to be an improvement on the parents.

(4) If the parents are unhealthy, or lead unhealthy lives, and if the union is one of convenience, the tendency to improvement is not only lost, but the children may retrogress or even show signs of decadence.

The important bearing of love matches on heredity will be further discussed in the chapter on "Evolution and Sex Questions."

CHAPTER IV.

EVOLUTION AND THE RELATION OF THE SEXES.

TO understand the relation of the sexes, you must realize something of the origin of the division of the human race into two sexes.

At some very remote period of time, probably millions of years ago, our ancestors were bisexual, or hermaphrodite, combining in each individual the organs of both sexes. The remains of this condition are to be found in the bodies of human beings of both sexes to this day, and are well known to anatomists. Two of these remnants apparent to everyone are the useless breasts which every man has but can never use. Partial reversions also take place to this primitive condition every generation. A certain number of people are born who are partly male and partly female. As a rule, one sex predominates over the other, but it is not always easy to determine which it is. They vary, and might in some cases be called partial hermaphrodites, rarely, if ever, complete. Again, when the child begins to form within its mother's womb the growth of the structure for both sexes is the same, and it is only at the end of the second month of gesta-

tion that any indications of a difference can be observed.

It is very probable that in those very remote times some of these bisexual individuals preferred the male rôle, and others the female rôle. This arrangement would afford greater protection to the offspring, and their chances of survival would be greater. Those who survived would tend to inherit the same disposition. In course of time, if it was an advantage to the race, the cleavage would become accentuated until the differentiation would be complete.

In addition to the reversions in structure already described, there are other cases where the structure is normal, but the psychology of the brain is abnormal. Sometimes a man is distinctly effeminate in his ideas and nature, and prefers a wife who bullies him. The same reversion is seen in some women, who scoff at the, to them, tame domesticities of their sex, and would like to take up the manly professions, and if they do have any children consider that the State should take care of them and so leave them free to do a man's work! In other words, they are partly bisexual, in that they have a woman's body and a man's brain and mind.

Another reversion also occurs in which the special sexual instincts are reversed, and certain men have no liking for women, but a morbid desire for their own sex. The same

abnormality is found in certain women who do not care for men, but are attracted to their own sex. These people should be treated as lunatics. They deserve our pity, because most of them are born with this abnormal brain condition and are not responsible for it. It is, in fact, a form of degeneration, or decadence, already discussed in the chapter on Heredity.

What then is the normal type of woman? To ascertain this, we must find the type of woman most likely to survive, that is to say, most likely to leave several strong, healthy children. If a woman leaves no children to inherit her qualities, she has no effect on the future women or the race.

Let us consider two women, both of equal constitution. One is self reliant, thinks babies are a nuisance and men are rather conceited creatures, that wives ought not to obey their husbands, nor should wives be slaves and chattels, but live their own lives. She takes up, perhaps, the profession of medicine. She has to live in London, or some other city, for some years; the work is hard and exacting. At the end of it she shirks motherhood, because it would entail the loss, for a time at least, of all that she had worked for. If she accepts motherhood, she is likely (unless a very exceptional woman) to have delicate children, on account of the strain on her health produced by her work.

Now for the second type. She is gentle,

has a soft voice, likes to do things for her brothers, admires their strength and fearlessness, has no ambition at all to do men's work, but she loves children and simply dotes upon babies, greatly appreciates the comforts of her home, has a wide heart that takes in all living creatures, enjoys moderate exercise and the fresh air, weaves beautiful dreams about some godlike young man, who is strong, brave, noble and handsome, and who will carry her off her feet to orange blossom and wedding bells.

If you compare these two types, I think you will agree that the latter (essentially feminine) type will not only have more children and finer children, but she will also get on better with her husband, will devote more of her attention to her children, and, as a result, they will grow up with a better chance of survival. Her daughters will tend to inherit similar qualities. Besides that, men avoid the masculine independent type of woman and prefer the essentially feminine. If then the masculine type of woman has less children and weaker children, and men also avoid the type, it must be evident to anyone of intelligence that the majority of women of the future will be much the same as they are today. The difference between the two types is not one of brains, but of temperament. The woman who loves a husband, a home, and her children, may be quite as clever, if not more

so, than the independent woman who talks about living her own life and employs most of her time in doing work that could be done by men.

It has taken hundreds of thousands of years of evolution to produce the average woman of to-day, and it will take at least tens of thousands of years to produce any alteration. There are no new women, but just the same difference of type which has existed since the Stone Age.

To sum up, the fittest woman to survive is the essentially feminine woman, who is the complement of man, because she leaves more children, and stronger, than those of the woman who does man's work.

At the same time, all girls should be taught some useful occupation suitable to their sex, by which they can earn their living, in order that they may not be driven into a loveless marriage for want of the means of subsistence. Every girl should be in a position to make a choice, and feel that her husband is her proper mate.

The most important women to society and to the State are those who marry, because in bearing children they are doing the one important operation that men cannot do. On that account, one would have expected the State to put in the forefront of any scheme of education the teaching of domestic economy and the care of children. Our mandarins do not even

mention it. Then they wonder that the working man takes to drink when he has a wife who knows nothing whatever of her business in the partnership, that infant mortality is a scandal, and that thousands of children grow up into weedy youths and sickly girls.

The Deity's great law of Evolution has given us intelligence, and if we fail to use it the punishment is swift and certain.

In seeking for guidance on the subject of marriage from the dogmatic religions we are confronted by two contradictory systems. Mohammedanism allows four wives and concubines as well. Christianity allows one wife and no concubines. The former makes divorce easy, the latter prohibits it altogether. Both religions claim divine commands for their laws. Neither religion is able to prove that the Deity has made either one law or the other.

Looked at from a rational point of view we have to try to arrive by our intelligence at the best regulations *which will help forward the Almighty's divine law of Evolution*. In other words, what regulations, if any, will most promote the moral and material welfare of mankind.

Marriage was, no doubt, first instituted for the protection of women, or, as we see among modern savages, a means by which the man obtained one or more servants to tend his cattle and till his fields. With the advance of

civilization it became a means by which a love union by two persons of opposite sex received a public approbation or status, and finally a legal bond carrying obligation.

During many centuries these bonds, which should remind us of chains of flowers, redolent of the scents and colours of the four seasons of life, have been in many instances debased and trampled in the mud, by the fortune-seeker, the ambitious, the voluptuary and the self-seeker. And none of the dogmatic Churches has ever sought to prevent these worldly unions by any lectures to the candidates, or religious advice. Love is the one and only foundation for a happy marriage. Love does not imply a mere gust of animal passion, which may pass off in a short time. It appears to be an instinct, with passion for its foundation, and a superstructure in the mind which brings to the surface the ideals that weak human nature would like to attain. A man really in love will never do anything to harm his beloved, her honour is safe in his hands under any temptation, and, in case of need, he will sacrifice his life to save her from harm. This instinct has been gradually produced by Evolution, because it is an advantage to those who inherit it, and helps their survival.

Most young people are quite unaware that they are also guided by instinct in their choice of a mate. Before they have felt the all-

absorbing flame they constantly describe the sort of person they would prefer, and are much astonished to find it is some one quite different.

In the vast majority of cases young men and women are attracted by the person of the opposite sex who has the qualities in which they themselves are deficient. The truth of this is quite evident if you observe those of your acquaintance who have made love matches. In other words, men and women fall in love with their complement. Both men and women often wonder what their friends could see in the person they have chosen to marry. The answer is, they saw their complement.

It is obvious that this must be an advantage to the race, because the children are, more or less, a blend of the two parents, and are therefore better balanced, mentally and physically. As they are the fittest to survive, the instinct is constantly inherited and is becoming widely spread amongst civilized nations. The greater the number of people which each person meets before marriage the more likelihood there is that each person will find his or her real complement. Therefore every opportunity should be given to young people to meet and know each other. In addition, every normal man is attracted to the essentially feminine woman who has no ambition to excel in man's work, except, of course, the abnormal effeminate

man and masculine woman. He is perfectly right, because the essentially feminine woman will stay at home and devote herself to her finest jewels, her own children. This, again, will help the children to survive in the struggle for existence, and the daughters will mostly inherit their mother's feminine qualities. The normal women are not attracted to the effeminate man, but to the strong, healthy, clever, efficient men. The result is that the effeminate men and the masculine women leave but few children and will always be in a minority.

You will now understand how important it is for a nation and the race, that both young men and women should be at liberty to choose their mate. All arranged marriages are against the law of Evolution.

You must also realize that instinct, like the structure of the body, is not perfect. Boys from fourteen to sixteen, and girls from twelve to fourteen, arrive at puberty and are capable of bearing children. This early age for reproduction was no doubt an aid to survival millions of years ago, when the dangers to life were multiplied a hundredfold, and the intelligence to avoid them was less in a similar proportion. At that time it was no doubt one means of survival, but now with the enormous population of the world the advantage has passed away. Further, with the modern competition between man and man, the instinct

is a positive disadvantage, because the children of immature parents are usually of weak health and vitality.

This is one of the best illustrations of the superiority of reason over instinct in teaching us to avoid too early marriage. In other words, instinct is not always a safe guide.

Most men and women are capable of falling in love more than once after an interval of a few years. It is perfectly normal for a young widow to marry again, although she began with a love marriage. The reason for it is this, that those who married again in the past left more children to inherit their tendency, whereas the young widow who failed to fall in love again would not leave so many children to inherit her tendency.

One very important factor in the choice of a mate is age. As a rule, the immature girl of fifteen to seventeen fancies the mature man of forty, because his maturity balances her immaturity; and the resulting child will be stronger than when both parents are immature.

At the age of twenty she will prefer a man about thirty. If she be left a widow at the age of forty she will prefer a boy in the twenties. In each case her instinct is *for that particular age* quite right, and would produce the best child at that age. But the union would not last long enough to bring up the child. This would go against its chances of

survival. Reason here again steps in, and points out that the only union likely to last and produce the most and best children is that of the girl of twenty with the man of thirty. We think that Evolution is probably working in that direction, and that in another ten thousand years most marriages will take place at about twenty for the woman and thirty for the man. The reason why a man should be ten years older than his wife is because his sexual life lasts longer, sometimes much longer than a woman. Many men at forty are in the plenitude of their powers, whereas a woman of the same age is decidedly on the wane, particularly if she has had several children. If both are of the same age, or the man younger, he is liable to fall in love again with a younger woman, which is to the detriment of his children and his wife.

The arguments that apply to the ages of women falling in love apply also in most respects to men. The quite young man is generally attracted to older, matured women. The old man is attracted to quite young women, because their youth makes up for his want of it. Goethe, when he was 72, fell in love with a girl of 15, whom he met during a visit to Marienbad. Such unions cannot last, but what is of more importance is the fact that the children of old men and women are not strong, in fact, they are frequently degenerate. The best age for a man

to be a father is from 30 to 50, and after that he would do well to make up his mind to have no more children. Some men of weak constitution might with advantage cease ten years earlier.

In the East a man may have several legal wives. In the West it is a criminal offence to have more than one legal wife. The Bible, which is supposed to be inspired by the Almighty, allowed the holy men of Israel as many wives as they liked. Solomon had 700, and 300 concubines, and yet he was accounted a wise man! David is held up as a pattern of holiness. Although he had many wives, he even took away Bathsheba and gave express orders that her husband should be put in the forefront of the battle so that he might be killed!

If a man married a woman and she did not find favour in his eyes, he was advised to divorce her and send her out of the house (Deuteronomy, chapter xxiv).

After about a thousand years, the Great Almighty who rules over one hundred million worlds for all eternity, is supposed to have changed His mind like any poor human being; and instead of as many wives as a man likes, he is confined to one, and is not allowed to divorce her at all, even when she commits adultery!

The Koran, also inspired by God, allows a man four legal wives, and concubines if he

likes. Divorce is quite easy, and can be determined by the husband himself, but he must return the dowry of the divorced woman.

Buddha, to a great extent, ignored women. He objected to religious communities composed of women, and discouraged them from becoming his disciples. Most Buddhists practise polygamy.

You will now understand that the question of sexual morality is not an easy one to decide. What the Old Testament considered moral, the New Testament considers highly immoral. What the Mohammedans consider moral, the Christian Churches consider highly immoral, and both claim to be inspired by God.

Unfortunately, neither religion can give any real evidence of divine inspiration for their opposing tenets.

Let us put all dogmas on one side, and look at the question from a different standpoint.

What have the laws of Nature, which are God's laws, to say on this question? The laws of Nature must have been made by the Great Almighty.

Whatever arrangement of the sexes produces the most moral, intellectual, and strongest specimens of the human race, is the best according to the law of Evolution.

Free love, which is much the same as promiscuous intercourse, leads to venereal disease and sterility to a great extent. Any children

that might result would only have a mother to depend on. Their chance of survival in the struggle for existence would be much less than that of a child who also had a father to rely on.

Polyandry, meaning a woman with several husbands, we must also rule out of court, because here again disease and sterility would, in a great measure, cause the type to die out for want of children.

Polygamy and monogamy, many wives or one wife, remain. Putting all dogmas on one side, let us consider what History tells us. In the struggle for existence between nations, which have been successful—the monogamists or the polygamists?

In the seventh century, when Mohammed welded the Arabs into a nation, they very soon conquered Persia, Syria, Palestine, and took Jerusalem, killed those Christians who resisted, took any of the women they wanted for their harems, and gave the men who were spared in Syria the option of becoming Mohammedan or being expelled from the country. Then they actually built a mosque on the site of the life and death of the Christian Son of God.

We hear a great deal about miracles in the Romish Church; surely, if ever a miracle was required, it was when this profanation occurred; but there was no miracle. Instead of that the Mohammedans have retained their

hold on Palestine for centuries, in spite of Crusaders and Popes and Bishops and all the Christian nations, until the present war, when British troops drove them out. Finally, these polygamous Arabs conquered Egypt, Tunis, Algeria, Morocco, Spain, and even penetrated into France. The monogamous Christian had to submit and to put up with any treatment his conquerors thought good enough for him.

A few centuries later came the Turkish conquests. After taking over most of the Arabian Empire, they conquered Asia Minor, Thrace, Bulgaria, Serbia, Hungary and Greece. Byzantium fell before them, and the tide of invasion was only stopped at the walls of Vienna. Half the Christian monogamous world had to submit to be trodden under heel by the polygamous Mohammedan.

They spat upon the Christian dogs, as they called them, massacred them when they liked, violated their women, and robbed them of their wealth. This has been going on for centuries, and is even now being done in Armenia. So much for the monogamous Christian and the polygamous Mohammedan.

There were, of course, other factors to account for what happened.

The intellectual development of the Arabs was for centuries in advance of the Christian nations. They laid the basis of astronomy, mathematics, and chemistry. Although they

split into sects and fought honest battles between themselves, they never descended to the depths of infamy reached by the so-called Holy Inquisition.

It is only since the rise of Rationalism among the Christian nations and the increase in fanaticism among the polygamous Moham-medans that the former have taken precedence.

Again, the Christian sect of the Mormons, who take the law of the Old Testament as their guide for allowing polygamy, are a highly successful and flourishing community.

The instinct of the normal woman is for one husband, but the instinct of many men is for more than one wife. This has been brought about by the survival in the struggle for existence of those nations who have practised polygamy for thousands of years.

If we may infer the condition of our pre-historic ancestors from the condition of the present-day savages, we come to the conclusion that polygamy was in existence for tens of thousands of years. The interminable fighting between different tribes led to a great disproportion between the sexes, so that many women would rather share a husband than go without. When peace was made in Paraguay after the wars of Lopez, in the nineteenth century, there remained but one man to every twelve women ("Voyage of the Falcon," by Knight). Although illegal, polygamy was the natural result. With one

hundred or more women to every ten men, it was impossible to expect the other ninety women to resign themselves to a life of single blessedness. If the single wife objected, she was liable to share the fate of the Mameluke queen.

We must not, however, overlook one important fact in polygamous nations, namely, that two-thirds, or perhaps three-fourths, are monogamous, because they cannot afford to keep more than one wife.

The laws of Nature, having been made by the Almighty, should give us, if we inquire of them, an answer on this question that no one can contradict. One of these Divine Laws, founded on the rock of Eternity, and not based on the shifting sands of various dogmatic religions, is revealed to us by a study of the birth-rate. There are a few more males born than females, so that the Deity has only provided one wife for each man. Further consideration of this question will also show that one man, one wife, will give a better chance to the children in the struggle for existence. The father of a family from one wife will have stronger children, will take more interest in his children (a polygamist may have so many children that he does not even know them all individually). His energies instead of being dissipated among several women will be available for the work required for the support of his

family, or for the benefit of his nation, or for the cultivation of his mind and the strengthening of his body by physical exercises, all of which are factors in the survival of the fittest. Among the higher animals and birds, in a wild state of Nature, monogamy is more common than polygamy.

Evolution demands from you a higher spiritual ideal than either Christianity or any of the other dogmatic religions.

One of the worst blots on the character of Christianity is the sanction which it gives to promiscuous marriage. There is no moral teaching on the subject. The position taken up by the Churches is this: that a union blessed by marriage is moral and without marriage is immoral. That position is no longer tenable. The marriage of two people who do not love one another is an immoral marriage. When either party marries for wealth, for position, or for any other cause except love, the marriage is immoral. Worst of all is the marriage of diseased persons if children are born from the union.

Why is it immoral? Because the Great Almighty, by His law of the survival of the fittest, has decided that the weakly and diseased offspring of such unions shall die out sooner or later in the struggle for existence.

Have you ever been round the wards of a children's hospital and seen these poor little

mites suffering from disease, the result of inherited want of constitution? The one time in their little lives which should be a happy period of joyousness is changed to pain and sorrow. There they lie, tied to a splint, perhaps racked with pain. You who have noticed how much a child expresses its joy in movement will understand how great is their deprivation.

It is not only in the children's hospitals, but in all the others, in the workhouse infirmaries, in the lunatic asylums, in the epileptic colonies, in the reformatories, in the idiot asylums, in the slums, in the prisons, there will you find some of these children grown up who, with the aid of various well-meant charitable institutions, have managed to survive for a time, just long enough, perhaps, to propagate some more of their kind. Whether in the Republic of America, or the Kingdom of Great Britain, or the semi-autocratic Germany, or in so-called Holy Russia, you will find the same disgraceful condition of affairs. In the millions of Christian Churches not a word is ever said against the immoral marriage which produces these awful conditions.

It is an absolutely verified fact that the liability to tuberculosis, to lunacy, degeneracy, and nerve diseases generally, is inherited by most of the children of parents who suffer from these defects,

If you are a woman reading this, do you realize the sin you are committing by bringing a weak, delicate child into the world? Do you realize the martyrdom which these children suffer? Do you realize how your heart will bleed to see the sufferings of your own child—how it will drag on its miserable existence, perhaps for years, until death grants it a joyful release from suffering?

And if you are a man do you not wish for a son who will grow into a real man, strong and self-reliant, courageous, yet gentle, who leads a clean, moral life, and is a credit to his father and his country? Would you like him to be a chronic invalid, peevish and weak, perhaps immoral and degenerate? No. Well, then, see to it that if you are not healthy, you leave no children.

The statesman's problem of the unemployed, or surplus population, is easy to deal with if such people are healthy. It is when they are unemployable that the difficulty arises. The Colonies will not take them, and employers of labour do not want them. This great problem has been before the world for hundreds of years, and yet, astounding is the fact, not a single religious body or Church has ever even attempted to face the problem and try to find a remedy.

We have already pointed out that the best marriage for the individual and for the nation is a permanent one. That is the ideal union

to strive for. But if a married woman, for instance, becomes an adulteress, is there to be no penalty? Adultery in a woman is a worse offence than adultery in a man, first, because the laws of Nature are more opposed to polyandry than to polygamy, and also because the woman is likely to produce a bastard in the home, which the husband has to provide for. Is not the husband entitled to divorce an immoral wife? The Christian Churches say No. He is to continue to live in sin with his impure wife, who continues to produce immoral children. The strange part of this dogma is, that it is contradicted by the Old Testament, which the Christian Churches tell us is inspired by God!

Leviticus, chapter xx, verse 10, states:—
“The man that committeth adultery with another man’s wife, even he that committeth adultery with his neighbour’s wife, the adulterer and the adulteress shall surely be put to death.” We do not recommend anything so bloodthirsty as this, even if it is supposed to be inspired, but in the interests of morality divorce should be allowed.

Deuteronomy, chapter xxiv, verse 1: “When a man hath taken a wife and married her and it come to pass that she find no favour in his eyes, because he hath found some uncleanness in her, then let him write her a bill of divorcement and give it in her hand, and send her out of his house. And when she is departed

out of his house, she may go and be another man's wife." There is a certain amount of laxity about this law of Israel. Divorce was too easy in those days. If the Bible is inspired by God, why do the Christian Churches oppose divorce? It is perfectly childish to tell us that the Great Almighty who rules over a hundred million worlds could change His mind like any human grain of dust.

The Old Testament and the New Testament cannot both be inspired, because they contradict each other.

If we look at the question from the point of view of God's law of Evolution, we come to the conclusion that divorce should be allowed, not only for adultery, but for any form of immorality that interferes with the improvement of the race. We have already pointed out that it is immoral to produce diseased children. Every precaution should be taken to prevent diseased persons from having children (see Chapter III). If, however, disease is discovered after marriage, it should be ground for divorce: Well-marked tuberculosis, uncured syphilis, gonorrhœa, leprosy, &c., mental disease, persistent drunkenness, epilepsy, mental defectiveness, idiocy, congenital deformities, persistent drug taking, criminality, repeated convictions for minor offences, persistent desertion after three years, and sterility.

The ground for divorce should be broad, but it should not be made easy. The remedy is

rather to *prevent* the marriage of people who are not capable of carrying out the contract (see Chapter III).

Can anyone defend the position taken up by the Christian Churches, who are quite ready to marry an innocent girl who is persuaded into a loveless union with a man of position and wealth? Then when she awakes to the immorality of such a union, and takes a real man that she loves, the Churches turn on her and refuse to remarry her because she was divorced. Who ought to have warned her of the consequences likely to follow a loveless immoral union: surely the Christian pastor who married her?

If the Churches took some pains to advise their parishioners on marriage questions and protested against loveless marriages, &c., there would be some sense in objecting to divorce, but, as matters stand, their attitude merely encourages immorality. It is well known that where there are no divorce laws the grossest forms of immorality occur after marriage. The existence of this state of things has been the butt of the cynic and the humorist for hundreds of years. I could quote many instances where the fear and disgrace of going into the Divorce Court has kept women from dishonouring their husbands.

The marriage of blood relations should not be allowed for this reason: most men and women have some defect of constitution; if

both husband and wife have the same defect it becomes intensified in the children, and grave results may follow. The marriage of first cousins, under these conditions, is frequently disastrous, and should never be allowed. If people were perfectly sound it would not matter, but even careful investigation may overlook some defect in the apparently sound.

There is no objection whatever to the marriage of connections who are not blood relations. If a man likes to marry his deceased wife's sister, there is not the slightest objection. Indeed, there are many advantages. She is more likely to make a good stepmother to her own nieces and nephews than a stranger.

The opposition of the Churches to these unions is inexplicable, particularly as the Old Testament specially recommends them.

Deuteronomy, chapter xxv, verse 5, states: "If brethren dwell together and one of them die and have no child, the wife of the dead shall not marry without unto a stranger; her husband's brother shall . . . take her to him to wife and perform the duty of a husband's brother unto her."

What we have to consider in this, and in all other questions, is, what will most help on the improvement of the human race and raise the morality, the intelligence, and the vitality of men and women, in accordance with God's law of Evolution.

Prostitution arises chiefly from two causes: degeneracy in women, and the inability of many young men to marry when the desire to mate with one of the opposite sex is strongest. There are in every civilized community a certain number of young women in each generation whose sense of morality is slack, and sometimes quite deficient. They hear from other women of a means of living which involves no work, which appeals to their senses, and which affords amusement and variety. Owing to our stupid system of education, the subject of sex relations is ignored, both by the State, which ought to know better, and also by the Christian Churches.

These young women do not see the hideous spectre of venereal disease and sterility which stalks their footsteps, nor do they see the abyss of degradation, want, and destitution, into which most of them will, sooner or later, fall. Some of these women, but very few, may be reclaimed. Those who are not innately bad, but through stress of circumstances have been forced into this means of obtaining a livelihood, will in most instances recover their self-respect if given a helping hand. The degenerates prefer to wallow in the dirt rather than do a day's honest work.

It has always been a matter of surprise to rational men in England why the Christian Churches and many devout women should uphold free trade in prostitution rather than restriction.

Many a young man unable to marry makes brave efforts to keep himself pure for his ideal. How do the State and the Churches help him? They leave these prostitutes free to tempt him at every street corner. In modern England, in restaurants, in places of amusement, wherever he turns, there they are. No wonder that, sooner or later, the well-meaning young man is tempted and falls, and perhaps becomes diseased, with the result that there are so many less healthy husbands for the pure women.

All professions are subject to rules and regulations. If the honourable professions of Medicine and Law have to submit to them, why, in the name of Evolution, should the members of the degraded profession of prostitution be exempt? Is it to the good of the race and the individual that a woman should be allowed to convey disease as much and as often as she likes? These women, when they are too diseased to carry on their profession, go to a hospital, but generally refuse to stay long enough to be cured; they then go out and resume their life, and may infect as many as thirty men or more in a week.

If some restrictions were placed upon the professional prostitute, it would act as an excellent deterrent to the amateur, who is inclined to tread the same path.

The excess of sexual energy found in men and prevalent throughout Nature is one of the factors in producing prostitution.

There are amateur prostitutes in all classes of the community, from the highest to the lowest. Having other means of subsistence, the majority exercise a certain amount of selection, are not so promiscuous as the professional, and when diseased can afford to undergo a proper course of treatment until cured. They are not the same danger to the community, and can often be reclaimed.

Is there any merit in celibacy? Only for the minority who are diseased. Even then it is merely a question of children. If two persons who are diseased decide to marry, but not to have any children, no one should blame them. The union hurts no one, and does not obstruct Evolution; but if they bring children into the world to inherit their disease, to suffer, and finally die out, they are committing a sin against God's law.

The idea in the fable of Adam and Eve that by eating the apple of the tree of knowledge they became cognizant of the relation of the sexes, may perhaps account for the childish view which permeates the Christian Churches that there is something wrong and sinful about the union of the male and female. Nothing could be more absurd. The Great Almighty has decreed that our strongest instinct shall be for the reproduction of the species. According to the Christian belief, has not God Himself set an example by becoming a family man and begetting a Son?

Is not every man raised to a higher plane when in love? Will he not rise to greater heights of altruism for his wife and children? Does it not widen his sympathies? Does it not soften the asperities of his nature? Do not the responsibilities he has undertaken steady him and render him a more useful member of the community?

If among you are some men who think they should devote themselves to the service of God, they ought to marry, so as to leave children to inherit their fine qualities, and so help to leaven the low mass of humanity. In addition, such men, if married, will be better able to understand and sympathize with the troubles and problems of their fellow-men and women.

Why should you imagine that the Great Almighty will be pleased when you take a vow against the strongest instinct He has given you, or that shutting yourself up in a religious house is a sign of piety? What good are you doing there? Are you finding a remedy for any of the evils that afflict mankind? Are you doing anything to raise the fallen, to secure justice to the oppressed, to help to banish disease, to keep the widow and the orphan, to educate people in God's laws of Nature? Are you so conceited as to think that God will alter His laws because of your prayers? Do you realize that the whole earth is but a grain of dust among the

hundred million worlds scattered through space, and that you are but one of thousands of millions of people on that grain of dust? Are you not aware that the Great Almighty never interferes with the laws He has made? Has He not given us intelligence so that we may use it and try to understand His laws? Instead of thinking only of your own soul, go out into the world and try to help other people's souls. If you do that you need not worry about salvation. It will come unasked, whatever faith you hold.

Monasteries and convents are an offence in the sight of Evolution. As might be expected, history demonstrates that men and women living under these unnatural conditions sooner or later lose their spiritual life and succumb to immorality and materialism. See the letter addressed to the Abbot of St. Albans, by Morton, Cardinal Archbishop and Legate of the Apostolic See in the fifteenth century ("Short Studies on Great Subjects," by Froude).

If you have led an evil life and would repent and make amends, go out into the world—you can do infinitely more good there than you can shut up within the walls of a monastery.

If your will is so weak that you cannot withstand the temptations of the world, or if you feel that you are unable to cope with the perplexities of life, your proper place is in a

sanatorium, under the care of a medical specialist, who by treating your medical defects will restore your spiritual nature.

One of the scandals of the Christian Church of Rome is in not only allowing, but also, in many cases, persuading girls of 18 or younger to enter convents, and young men to enter monasteries. In the first place, these young people are going against the law of God, that they should elevate their lives by a love union. Secondly, at this early age, they very rarely understand what they are doing and what they are giving up. It is dishonest to take advantage of their ignorance. Thirdly, it is the duty of a really good man, or woman, to marry and leave children to inherit their noble qualities and so help to raise the human race.

Neither girls nor boys should be allowed to take any vows or enter a religious house until they are 25. Most of the dogmatic Christian Churches have little confidence in their own tenets, in that they feel obliged to confirm boys and girls at an age when they are quite unable to form their own opinion. Monks and nuns should also be allowed, by law, to leave the convent when they like and take their property with them. Hammurabi, who was King of Babylon 4,000 years ago, was in advance of modern times, for his code included a law to this effect.

The mediæval belief that most women are

devils is perfectly childish. A modern St. Anthony would be laughed at and told to take a wife and behave like a normal man. Women are no better and no worse than men. There are good and bad, clever and stupid, strong and weak, cold and passionate, moral and immoral, &c. The only differences between men and women are those which help survival. Women are more emotional compared with men, and their emotions are more on the surface, their sympathies are more easily stirred at the sight of suffering. They are more affectionate, and their affections last longer. All these qualities help the survival of their children.

Women are quite as honest and truthful as men, except when they are obliged by their inferior strength to resort to guile. In all sex relations their intuitions are quicker than those of man. Love and passion are quite as strong as in men, but not so easily roused, and then only for a limited time, with intervals of abeyance. Vanity and love of adornment, within bounds, are quite natural in women, because they make them more attractive and give them a better choice of husbands. It is just as right and proper for a woman to look for a mate and to take any steps that may lead to her finding a husband, as it is for a man to look for a wife. The mother who helps her daughters in this respect is carrying out her highest duty. The con-

temptible mother is the one who degrades this sacred duty by selling her child and prostituting her, under cover of a marriage, to a rich man whom her daughter is unable to love.

A silly superstition still survives among some of the uneducated priests, viz., that the pain women suffer at childbirth is the result of a curse pronounced by the Almighty. As a matter of fact, nearly all animals suffer pain, because the new life has to be expelled from the womb by muscular contraction, and the passage has to dilate to allow the child to pass through. In human beings the pain is rather greater on account of the change from the all-fours position of our remote ancestors to the upright. This necessitated considerable strengthening of the outlet, so as to sustain the direct weight of the internal organs in the upright position. Greater resistance is thereby offered to the extrusion of the child. In delicate women, whose tissues are easily stretched, there is not much pain. The resistance which occurs in strong women causes considerable pain. Rationalism, leading to scientific investigation, can entirely abolish the pain, however great. This is what God intended, as we believe: that we should use the intelligence which He has developed in us through Evolution, to relieve pain and suffering.

CHAPTER V.

EVOLUTION IN MODERN TIMES.

MANY people fail to appreciate the fact that Evolution is still at work. They seem to think that because we have reached a high degree of civilization therefore there will be no further changes.

Do you imagine for one instant that it is possible for a law made by the Great Almighty ever to come to an end? Is there any possible reason why this law, having lasted millions of years, should now be abrogated? Do you think that God is a feeble, unstable, emotional person like most men, with their little hopes and fears, and a span of life but a few seconds in the roll of eternity?

The fittest to survive are those who are the most moral, the most intellectual and the strongest physically. Let us consider the latter of these three qualities. It must be evident to anyone who thinks for a moment that an Esquimaux is better fitted to survive in the Arctic regions than a negro, because he is able to digest large quantities of fat. The oxidation of this within the body keeps up his temperature and enables him to resist

the cold. On the other hand, the negro is best fitted to survive in the tropics, because of his constitution; an Englishman in a temperate clime. Our countrymen in India find it necessary to send their children home to grow up in England, because otherwise they would deteriorate. You can understand, therefore, that the environment (the surroundings) of man has a great deal to do with his survival. Although man is a most adaptable creature there are limits to this capacity. When it comes to physical hardships produced by climate, the men whose ancestors have lived in that particular climate are those who have the best chance of survival, other things being equal.

Now that the brain of modern man which towers above his body enables him by machinery and other aids to almost dispense with his muscular power, there is not much likelihood of any great changes occurring in the structure of the body. In fact, man having existed in his present shape (except for slight modifications) during at least half a million years, nearly all the variations from the standard type have been eliminated, except the improvement in the brain.

Some minor alterations are taking place, and very slight variations of structure still occur and will, of course, continue to occur, but as most of them offer no advantages under present conditions their tendency is to

die out. Of the minor changes in modern man one of the most marked is the decrease in the size of the lower jaw, brought about by disuse. Mastication is much less necessary now with our soft and carefully prepared food. If you examine the skulls of the men who lived only one or two thousand years ago you will notice that the upper and lower teeth in most cases meet exactly opposite to each other, whereas, in most modern men, those of the upper jaw overlap the lower. The upper jaw, being concerned in other functions besides mastication, has not deteriorated to the same extent; hence the overlapping. This alteration in the lower jaw causes trouble with the teeth, and every year a certain number of people whose systems are unable to adjust themselves to the new conditions die out.

The appendix, which is a vestigial remnant of what was at one time, hundreds of thousands of years ago, an organ for the digestion of cellulose, often causes death, although in late years the mortality has been considerably reduced by progress in surgery. Here, again, those whose systems have adjusted themselves to the presence of this unused and dangerous remnant of a former existence survive, while the others in many instances die out.

Human beings, at one time in their early existence (before even the common ancestor to man and the manlike apes were developed)

were bisexual or hermaphrodite. The separation into two sexes was no doubt a very gradual process. As a result of this early condition the bodies of women contain vestigial remains of male organs, while the bodies of men contain vestigial remains of the female sexual organs.

Individuals are even now born, after millions of years, of indeterminate sex. Sometimes they are partly male and partly female, and it is sometimes difficult to decide which predominates. As a rule, the organs are more developed in one direction than in the other. A return to the perfect hermaphrodite with both sexes developed in one person is rarely if ever seen, at any rate during the last hundred years. Such victims of atavism are generally sterile.

Like the appendix, these remnants of our former existence are liable to special forms of disease, which annually account for a good many deaths, although here again the progress of surgical science has reduced the mortality considerably.

Besides the tendency to atavism, new variations in the shape of the human body occur from time to time. Six fingers or toes instead of five. A web between the fingers. This variation would soon become established if we led an amphibious life. A change in the position of the heart, liver, and other organs also occurs. Other variations appear from time to

time, but none of them help survival. The weak points in the structure of the body are more than compensated for by the enormous (compared with early times) development of the brain. All that we can say for certain, in the present evolution of the human body, apart from the brain, is that the lower jaw is becoming smaller, and that vestigial remains in the body will, in time, become less dangerous to life, because those in whom they cause trouble tend to die out.

The great change that evolution has produced since man emerged from his animal condition, has been, and continues to be, in his moral and intellectual qualities. There is no greater mistake than to imagine that force is the chief factor in evolution. In a struggle between two tribes, say, of Red Indians in modern times, the individual strength of the men of each tribe would count less for success than a sense of altruism. Supposing that the latter was present in the one tribe and not in the other. Each individual would be ready to die for the common good. There would be more cohesion. Each man would trust the other to do his duty. A combined and united attack would be easier to perform. In addition to the moral quality of altruism, intelligence would also play a greater part than force, not only in the tactics and strategy of the chiefs, but in the forethought and inventiveness of the tribe in times of peace. If one

tribe could continue to fight on because the capitalists of the tribe had stored food while the other tribe began to starve for want of it, or if the bows and arrows of the one were more accurate, or could kill at a longer distance, it is quite easy to see which side would be victorious. In the struggle for existence, other things being equal, the more moral and intellectual tribe would survive, kill off, or make slaves of the other and appropriate their hunting grounds and such of their young women as pleased them.

At the battle of Omdurman, although the Anglo-Egyptian forces were outnumbered by (some say) three to one, and although individually the Mahdists were quite the equal of the British soldier in physique and courage, and probably better than the Egyptian soldiers, they were absolutely defeated, because they were lacking in the moral qualities necessary for submission to discipline, cohesion and united effort; but most of all were they defeated by the intellect of the inventors who produced arms of precision, rifles, machine guns, and artillery, by which they were mown down before they could even come to grips, and also by the intellect and moral qualities of the Anglo-Egyptian officers, who year after year worked on with that stern sense of duty only to be found in the higher races of man.

People who are deficient in moral qualities are constantly being eliminated, while the more moral survive.

In any community of men and women who are interdependent, certain rules of life must be observed if that community wishes to hold its own in the struggle for existence. Of these, honesty is one of the most important. To take our illustration again of the two tribes, one of which is honest and the other dishonest. If the latter, in preparation for war, had scamped the work of finding good wood for bows and arrows, or had sold the food supposed to be stored for war time, that tribe would succumb in the fight to the more honest tribe, other things being equal. When it is the individual who in modern life is found to be dishonest, he, or she, very often succumbs in the struggle for existence. It is difficult for him to earn his living, to find a decent wife, and to keep out of prison. As a result, he may leave no children, or, if there are any, they are degenerates, and tend to die out in most instances. The man who only becomes dishonest under stress of great temptation may recover his self-respect and his position in life; and on account of possessing such a moral quality he will manage to survive and may leave children.

In connection with this subject, you must realize that men and women cannot be classified as moral and immoral. (The word moral is here used in its widest sense, and not merely in relation to sex questions.) If you picture to yourself a ladder, and place at the

top the man who under no circumstances would be immoral, and at the bottom those unhappy creatures who are born with no sense of morality, and then fill in each separate rung of the ladder with the intermediate forms, you will better appreciate what is meant.

Starting from below with the man devoid of any moral sense, you have a number of gradations, each class improving on the one below, until you reach the more or less perfect men at the top. The argument applies to all the other qualities of man, such as liability to disease, &c.

A great many men who suffer from weak will power, particularly when associated with an easily exhausted nervous system (neurasthenia) succumb to alcohol or to various drugs. The man who takes a moderate amount of alcohol uses it up in his system, and is none the worse for it.

You may ask, what is a moderate amount? It will depend on the individual, his inherited qualities, his work, and his environment. You must also bear in mind that alcohol is one of the products of Nature, and like a great many other products, is valuable to the human economy in small doses and poisonous in large doses. If you feed a man entirely on sugar he will soon die; so will he also, if you feed him entirely on eggs. Arsenic and opium, two of the most valuable medicines we possess, are most beneficial in small doses, poisonous in larger doses, and fatal to life.

Alcohol in too large doses is particularly poisonous to the nervous system. The brain becomes less efficient, memory suffers, the power of quick decision and accurate reasoning is lost. The victims of this habit, sooner or later, lose their occupation or business, and become useless. The wives of such men, and their children, suffer from lack of means and proper education and sink down in the social scale. This, however, is not the only means by which the unfittest to resist alcohol die out. God's law of evolution is drastic in its action on the children of drunkards.

We have mentioned that most drunkards inherit a weakness of the nervous system which makes it difficult for them to resist alcohol. This is inherited by the children in an enhanced degree, and the poisoning by alcohol of the germ cells from which the children are formed causes the most disastrous results. Criminality, insanity, epilepsy, imbecility, infantilism, idiocy, paralysis, debility, want of developmental vigour, structural abnormalities of the brain and head, are common. It is the children of drunkards who are often the starting point of various inherited nerve diseases, including insanity, when they do not die out in the first instance.

Most of them are eliminated in time, but with our present ridiculous system of dealing with them, a good many manage to leave children to become a charge on the State, and

a severe tax on the sound members of society. In the time of the cave man they would soon have been wiped out by the forces of Nature unrestrained by a sickly sentimentality, the outcome of civilization. Even with all the efforts of the unpractical sentimentalists in modern times, these unfit persons die out in the end to a great extent, but it takes much longer.

Anyone who is conversant with our asylums and workhouses, finds his heart wrung with pity for these poor creatures, whose condition is due to their parents; and his mind is filled with indignation that some steps are not taken to prevent the birth of these hopeless children, and the martyrdom which they suffer in their lives.

We might here point out that Prohibition is not a cure for drunkenness. It is impossible to treat men like children. Besides, alcohol is only one out of dozens of stimulants, all equally poisonous in large doses. We must work with the great law of God, that those who are so weak that they cannot resist temptation are doomed to die out in the struggle for existence, and segregate the worst specimens.

Stupid people are constantly being eliminated. If you read a daily newspaper you will find many examples. Some people go on a river, knowing nothing of boating. They upset and are drowned. Sailing on the sea,

they fix the sheet. On comes a squall and the boat capsizes. In the skating season they persist on going on the ice, although warned that it is not safe. Some people will persist in bathing at spots which are well known to be unsafe, and lose their lives in spite of being warned. Want of knowledge, due to defective education, accounts for many fatal accidents. A young man, learned in classics, but ignorant of science, started to clean the suit he was wearing with petrol; he then lighted a cigarette, the petrol on his clothes took fire, and he was burned to death. The man who walks in a forbidden area during the war, and refuses to answer a challenge from a sentry, is promptly shot. The fault is entirely his own, he is stupid, and cannot realize the necessities of war. There are thousands of such cases in which Evolution eliminates stupid people.

The greatest of all agencies in improving the human race is disease, that is, if you allow that the elimination of the vicious, the weak-minded, and the feeble, is an improvement. Most savage tribes believe that disease is caused by evil spirits or demons. This idea was held by the people of the old civilizations in Egypt and Babylon, tempered by a leaning to mundane advice, as well as to the incantations of the priests. In the Bible, the ancient Jews appeared to have regarded disease as an instrument of punishment that was used by

the Almighty when they sinned against his laws. Later, we find Christ holding the same view as the ignorant savage, and casting out devils, who were allowed to pass into the Gadarene swine. These views on disease continued to be held throughout the Christian era.

It is only since Rationalism has thrown off the chains of superstition and raised the lamp of knowledge, that any progress has been made. The advance in the last seventy years has been very rapid. Instead of man being the terrified and ignorant victim of disease, he is now the master of three-fourths of them, and will soon attain a similar result with the remaining fourth.

How very astonished one of the ancient Pharaohs would be if he knew that modern man could blast his nation whenever he liked, with at least half a dozen appalling diseases, could destroy his cities from a distance of 70 miles with guns, could rain death and destruction from the sky above, could send a message to Babylon through the air in a few seconds, could produce thousands of books at the cost of one written papyrus; could do the work of the farm by machinery at half the former cost, could dam up the Nile, and nearly double the area of cultivated land. Of all these marvels, he would probably be most astonished at the power of the medical man. We may, in fact, say, that if the modern

scientific medical men had kept their discoveries secret, they could have ruled the world. Instead of that, their chief desire has been to benefit mankind. An example that might well be copied by some of the religious bodies who have used their influence to secure political power and riches.

Diseases may be broadly divided into two categories. First, those produced by micro-organisms, and, secondly, those produced by man's disregard of the laws of hygiene, either through ignorance or stupidity.

Many delicate children are born every year, some of them through the fault of the parents, and some through circumstances that could not be controlled. A large number of these are swept away by the infectious diseases; the stronger children, with the help of medical science, are able to survive. Those weaklings who are not destroyed by the zymotic diseases, have to run the gauntlet of tuberculosis, to which many of them succumb. Some of them, with the aid of medical science, manage to survive and marry, and leave delicate children.

Perhaps the most striking effect produced by disease is the elimination of stupid people. In India, there are a great number of sects whose religious prejudices interfere with the sanitary measures necessary for the abolition of diseases. In the struggle for existence, people who hold religious views which are not

in accordance with the real laws of God, viz., the Laws of Nature, are doomed to die out. In some of the large cities in India we have the spectacle of the rational white men living in perfect security, while the bigoted natives are dying of plague and cholera in another part of the same town, because they absolutely refuse to allow the measures necessary for their relief, placed at their disposal by the more intelligent rationalist.

We ought not to blame them, perhaps, considering that we have among the rational nations a sect which states that there is no disease!

Their idea appears to be this: if you think in a certain way, you cannot have disease. Of all the curious mental warps produced by the degeneration of civilized life, this is the most curious. I am told that toothache, in particular, as well as other things, sometimes upsets this belief. You must not be very surprised to find that there are people of this opinion. When you realize that the most salient characteristic of the undeveloped savage is gross superstition, you can understand why degenerates, who are falling back towards the standard of their prehistoric ancestors, will also exhibit traces of their prominent mental characteristics.

These people who deny the existence of disease, are protected, to a great extent, by the rational population which surrounds them.

If it were not for the medical officers of health, the sanitary inspectors, and a whole host of hygienic measures, which preserve them from disease, they would very quickly be wiped out. Even with this help, a great many are eliminated.

We are also afflicted with people who oppose the measures taken to find a cure for disease in civilized countries. In order to work out the causes and the cure of diseases produced by micro-organisms, it is necessary to use animals. In the vast majority of cases nothing more is done than to inject some fluid under the skin with a hypodermic needle no bigger than that used by human beings for the administration of morphine. In England there is a law that all vivisection on animals must be done under an anæsthetic, and inspectors go round to see that it is carried out. Special permission has to be obtained for any operation done without an anæsthetic. Exceptions to this law are made in the case of fox-hunting and other sports. A pack of hounds are allowed to vivisect a fox without an anæsthetic being given. No one else is allowed to do vivisection without a licence. In spite of this, some of the most gifted men in the medical profession, who have given their time, their brains, and often their lives, without pay or reward, for the benefit of mankind, are thwarted, abused, and vilified by a number of cranks wanting in intelligence.

When you realize that through vivisection we have been able practically to abolish plague, cholera, typhoid, typhus, anthrax, glanders, malaria and yellow fever, and several other diseases, and also that much suffering in animals has been saved by the same work, you can understand how positively harmful this opposition has been, and how stupid are those who support it. Amongst other things, the anti-vivisectionists actually opposed inoculation against typhoid. In the Boer War, with 400,000 men in the field, there were 40,000 cases of typhoid. In the war against Germany, with 2,000,000 men in the field in France, after three years, there were only 4,000 cases. Let us hope that after this crushing evidence these misguided anti-vivisectionists will for ever hold their peace.

We have not space to quote all the instances of stupid people who are eliminated by disease, but there are two I should like to bring before your notice. Smallpox caused an enormous mortality before the genius of Dr. Jenner found a preventive in the shape of vaccination from the innocuous cow-pox. At the present day another set of cranks oppose this treatment. The opposition was chiefly centred in two towns. During the last forty years there have been no epidemics of smallpox in England except in these two towns. Several cranks died of the disease. An M.P. went out to India to preach against vaccination.

Within a fortnight of his arrival he was dead from smallpox!

About thirty-three years ago I was in Naples during an epidemic of cholera. The Roman Churches brought out their images of the Virgin and saints and carried them through the streets in procession, the priests dressed in gorgeous vestments, the acolytes carrying banners and swinging incense. In spite of all this the people continued to die, and the mortality steadily increased. Then a Rationalist who had studied the laws of God controlling disease appeared on the scene, and found the source of infection in one of the water supplies. This was cut off, and the epidemic stopped. A miracle, not of supernatural origin, but of rationalism and common sense opposed to superstition. A great many people died in the epidemic at Naples. Their death, like that of the people in India, was due to ignorance and a religious belief opposed to the real laws of the Deity.

In Russia, again, many instances have occurred where the ignorant and superstitious people have preferred their icons to medical science, and have even accused the medical men (whose only desire was to help them) of spreading the disease. Consequently they opposed the measures taken to limit the epidemic. As a result, of course, the epidemic continued to spread, the mortality increased, and tens of thousands of these ignorant, stupid and superstitious people were killed off.

It is not only the stupid and superstitious people who are wiped out by disease, but also those who are sexually immoral. The laws of Nature, which are the laws of God, are absolutely opposed to polyandry. If a man has several wives who keep to the one husband, no disease follows, although Evolution is against polygamy. On the other hand, if a woman has connection with several men, she almost invariably becomes diseased.

There are two forms of venereal disease, one which is generally local, called gonorrhœa, and the other constitutional, called syphilis. The local disease does more harm to women than to men, because it very frequently renders them sterile by closing what are called the Fallopian tubes, which connect the ovary with the womb. The immoral prostitutes and many of the amateur prostitutes become sterile and leave no children to inherit their immoral tendencies. Syphilis does not render women sterile, but when they conceive the child is generally stillborn. When, after some years, the virulence of the disease diminishes, a living child may be born, but it rarely lives long, and often shows signs of the disease. Finally, if such a woman has the patience to undergo a thorough course of treatment, she may succeed in having a healthy child that will live.

When men suffer from gonorrhœa they do not become sterile like women, although it

may occur, whereas in women it is almost the rule. A good deal depends on whether a woman realizes what is the matter with her and how soon she seeks medical help. A man suffering from syphilis, but who is past the initial stages and appears to be quite well, will, if he marries, have diseased children, unless he waits three years, and during that time is properly treated by a competent medical man. Even then there remains a residue of men of weak constitution who are never able to get rid of the disease.

When a healthy woman marries a man who is not quite cured of syphilis, if she conceives by him she appears to undergo a process similar to vaccination from the diseased child which she is carrying in her womb, and which protects her from the ravages of the disease. On the other hand, if a healthy woman marries a man who has gonorrhœa, she generally becomes sterile.

The remote effects of syphilis are very severe on those who are of weak constitution, and on those who do not carry out a prolonged course of treatment.

You will now be able to understand how the venereal diseases cleanse the race of the sexually immoral; that Evolution is absolutely against promiscuity, and that God's laws of Nature are more severe on women than on men. Innocent women often suffer through immoral men. But they also suffer from their own

lack of discrimination in not avoiding licentious men. A great many men and women either die from the disease, or leave no descendants, because they are stupid. Syphilis is very amenable to treatment, and when the patients see their symptoms disappear, they refuse to believe they are not cured, and consider their own opinion better than that of a man who has made a life study of it! Not unlike the stupid mothers who prefer the opinion of an ignorant nurse on the question of feeding infants to that of medical men, with the result that the child develops rickets, and in the struggle for existence is likely to die out.

We are now able to form a proper conception of the rôle of disease and its value to the human race. The Great Almighty allowed the development of these micro-organisms to compete with us just as he has allowed the savage carnivora, the poisonous snakes, and the venomous insects. The effect, as I have tried to point out, has been to develop our intelligence, and to weed out the immoral, the fools, the superstitious, and the unclean, and to preserve the moral, the intellectual, the clean, and those who have thrown off the shackles of mysticism, which weighs down the undeveloped brain of the poor savage.

You may ask, on what ground do we state that the unclean die out? The explanation is this: two of the most virulent diseases are the plague and typhus. The former is a disease

of rats. The fleas on diseased rats become infected. People who are not clean in their habits and allow rats and fleas to exist in their houses are those who die when an epidemic occurs. In the Middle Ages when the plague swept over Europe and killed off at least a third of the population, the number included a whole host of fanatics and ascetics who had a perverted idea of religion, and thought that because they wore hair shirts all the year and refrained from washing they were achieving a great merit in the eyes of the Deity. These people were, of course, infested with fleas, and being ignorant of the real laws of the Deity they were killed off. The result has been that in our time you may seek all Europe before finding a similar type of man. In India he still persists, but his very abbreviated clothing helps to protect him.

It is extremely difficult for a Rationalist to understand the mental attitude of these ascetics. Why the Deity should want a man to make himself miserable, we fail to understand. Our view, on the contrary, is that He has given us intelligence through evolution by the use of which we may make ourselves happy, and utilize and appreciate all the manifold blessings which are at our command.

If there are any amongst us who feel that they have offended against the laws of the Deity and wish to make expiation, let that man go

amongst his brothers, nurse the sick, comfort the afflicted, and help the widow and the orphan, instead of putting on a hair shirt and thinking only of the saving of his own egotistical soul.

While we are on the subject of disease, does it not seem strange to you that none of the so-called divine revelations, whether Buddhist, Christian, or Mohammedan, ever threw any light on the subject? Think what a huge load of suffering would have been saved to humanity.

The other unclean disease is typhus. This is conveyed by lice from one patient to another. The clean people, free of vermin, never take it.

Two of our army medical officers were sent to Serbia during the Great War, and in a fortnight they arrested the epidemic which had decimated the Servian nation. It was through the genius of the bacteriologists and vivisectors, who had worked out the exact cause and transmission of the disease, that they knew what sanitary measures to adopt.

You may, or may not, know that the plague has appeared in England twice at least in the last twenty years. Again it was the vivisectors and bacteriologists whose knowledge enabled the authorities to stamp out the disease. But for the labours of these benefactors you might not be alive now.

In the Old and New Stone Ages probably no class of persons was more quickly wiped out

than the lunatics. We may sometimes wonder how Palæolithic man, with no crops to depend on, no domestic animal, and nothing but a crude club, was able to survive in his struggle with the large and fierce carnivora of those days, even when he had a well-balanced brain. In modern times, some lunatics, owing to our faulty social arrangements (see Chapter IV) are able to survive who in former ages would have been gobbled up by the cave tiger and other animals. Fortunately for the race, a good many are eliminated even now. Some die quite early from brain disease, others commit suicide, and, in addition, not infrequently kill their wives and children as well. A good proportion has to be kept in permanent seclusion which prevents them from having children.

The great principle of Evolution is progress, and those who fail to realize this sooner or later suffer in some direction. The conservative manufacturer who scoffs at new-fangled notions one day finds that his go-ahead rival has taken his business from him. The stupid merchant who employs an alien clerk because he is cheaper, suffers a heavy penalty when a foreign rival, prompted by the said clerk, succeeds in stealing his connection. The farmer who still relies on rule-of-thumb methods of the last century and fails to take advantage of scientific methods and up-to-date machinery, finds himself before long in the bankruptcy court.

The recent Sinn Fein rising in Dublin is an excellent example of political stupidity. At a time when England was one vast arsenal of guns and ammunition, and when nearly every man was a trained soldier to the extent of four or five millions, a few thousand Irishmen, without any proper base, without any ammunition factory, without any transport, without any organized food supply, without any artillery, or machine-guns or aeroplanes, rose in rebellion, and imagined they would be successful. And to make things worse, they began the attack by treacherously murdering, instead of taking prisoners, the police and unarmed soldiers who were in the streets, or who were home on leave after being wounded by the Germans. What was the result? A large number of the rebels and most of their leaders lost their lives, as they well deserved. Apparently there was not a single man of common sense among them to give a cold douche to their vanity, and their ridiculous pretensions to defy the Government.

Very few people realize the extraordinary importance of disease in human affairs. When De Lesseps attempted to repeat his great achievement and construct another canal at Panama, he found himself entirely beaten by disease. Even the blacks died like flies do in cold weather. When some English doctors had worked out the life history and mode of propagation of the malarial parasite, and when

as the result of their labours it was found that yellow fever as well could be mastered on the same lines, the Panama Canal became a practical proposition. Any man of common sense could then devise the necessary sanitary measures to protect the workers. At each end of the Panama Canal there ought to be a statue to the genius of the bacteriologists and vivisectors who devoted their lives to the elucidation of these difficult and obscure problems, and received no particular reward for doing so.

Just think for a minute of the enormous number of lives that have been saved by these men and others like them, not only at Panama, but all over the world. Think what we owe to Pasteur who first put us on the right track when he demonstrated the micro-organisms that cause fermentation, and followed that up by finding the bacillus of anthrax. By preventing destruction of the silk-worm industry, and by finding a method to protect cattle against anthrax disease, he saved France the loss of millions of pounds. So spiritual a man was Pasteur that he refused all material rewards for his work beyond his somewhat meagre salary. An example that might well be followed by some of the so-called spiritual lords of Christianity, who live in palaces and draw large incomes from the Church. If they gave up this materialism, their spiritual advice would carry more weight.

Perhaps the greatest of all Pasteur's triumphs was the application of his knowledge to the treatment of wounds by Lister, an Englishman.

In every hospital in the world these principles are now in force, and it is no exaggeration to say that millions of lives have been saved, and will continue to be saved. In the old wars, the deaths from disease were generally twenty to every one killed by wounds. In this last horrible war which devastated Europe, disease was almost banished. Those dread spectres, typhus, typhoid, dysentery, cholera and malaria, which in former times often ended a war by destroying whole armies, are now hard to find. Wounds which in former wars were invariably fatal from blood-poisoning, are treated on scientific principles, and the patient is saved. Tens of thousands of families have been saved from mourning their beloved sons and husbands. The advantage to the race of saving these generous men who rushed to the colours in defence of their country as soon as the bugle call rang out, must be immense. Let us never forget those who died, and if we would wish our race to survive in the coming centuries let us cast out those cowards who would sooner see their wives and sisters dishonoured and their country devastated than fight for them.

There is another and very important aspect of disease in relation to natural selection

which requires consideration. In addition to those formidable diseases which are conveyed to the human body by means of water and insects, there are others which are carried by the air, such as influenza, smallpox, measles, scarlet fever, and, under certain conditions, tuberculosis. By means of vivisection, the bacteriologists have been able to practically abolish the former, and in time, we have no doubt the air-borne diseases will also be brought under control. At present the public has to take its chance of having any of these diseases, except smallpox, which is prevented by vaccination. A large number of weak, feeble children and young adults are eliminated every year. Those who are unable to resist these diseases die out, while the children of those who survive tend to inherit the same resistance to the disease as their parents. As a result, measles has become quite a mild disease in civilized countries, but when the disease was introduced into Fiji it killed off a third of the population in a few months. The dying out of aboriginal races when they come in contact with civilization is due chiefly to the diseases of civilized man. The latter having lived, more or less, in towns and other buildings for some thousands of years, has become immune, to a great extent, to all those diseases which infest houses. We who survive to this day are the descendants of those who were able to resist these diseases, while

the others were killed off. Tuberculosis and smallpox are the most destructive to the aboriginal. In Australia they are quickly dying out, and in Tasmania there are none left. In North America very few of the numerous and powerful tribes of Red Indians are left. A remnant of the Maoris of New Zealand, being a more superior race, appear to be holding their own. The early disappearance of the native Tasmanian was a great loss to anthropology. Their development was very primitive, and would have afforded us a picture of the condition of our own ancestors some fifty thousand years ago.

A very different result follows when the European goes to countries like India and China whose civilization is older than his own. Unless he exercises his intelligence to avoid infection, he is liable to die from one of the local diseases which do not exist in Europe, and against which his tissues do not inherit any special resisting power.

The special power of resistance to diseases which man has acquired, when his ancestors have for many generations been exposed to those diseases, is liable to be lost when a child is born with an enfeebled constitution. Even among some of the best stocks you will find perhaps the last child of a large family liable to the infection of tubercle. The mother's health has become to a certain extent exhausted by repeated pregnancies and advanc-

ing age, and finally a child is born who is degenerate, not in the usual sense in which that word is used, but only in the failure to resist the diseases to which his brothers and sisters are immune.

The woman of the future will be the descendant of those who have healthy children to inherit their qualities. If a woman dislikes men and has no children, she has no effect on the future race. Every generation this type dies out and is eliminated. Whereas the essentially feminine woman who wants a husband and who likes to have a home and little children round her knees leaves descendants to inherit those qualities, the masculine type of woman who becomes a doctor, or a lawyer, &c., as a rule has few or no children.

The period of gestation and suckling the infant afterwards take much out of a woman and render her incapable of carrying on any strenuous work. If she attempts to do both, the child suffers, is born a weakling, and will probably die out. The instinct of man is to choose the essentially feminine woman, who does not want a vote; and has no ambition to compete with men. The type of woman who likes pretty clothes, who adores children, who thinks men are darlings, and who knows how to make herself attractive, very often has quite as much, or more, brains than her more masculine sister. The instinct of man in choosing the more feminine type is absolutely

correct, because such a woman would make a better mother, and be more content to stay at home and look after her children, instead of going to meetings and exhausting herself in doing work which could be as well done by men. At the same time, every woman should be given the opportunity of going into any business or profession she likes. The number that will do so will always be limited, provided there are enough husbands to go round, for the reasons I have given.

It is also from the evolution standpoint a great mistake not to give girls their liberty after a certain age, say 18, provided they have been thoroughly informed on all sex questions, including even the venereal diseases. The advantage of this system is that the wantons and the vicious will be eliminated by becoming sterile, while the best types will pass through the fire unscathed and will become the mothers of the future generation.

One of the great drawbacks of the harem or zenana system, is the preservation of the bad and vicious women who are enabled by this means to leave children, but who would probably become sterile if they were given their liberty.

There is another type of woman that tends to die out. That is the woman with an excessive amount of vanity. She thinks more of an evanescent reputation in Society than she does of her own flesh and blood. When

she becomes enceinte, instead of devoting her health and her powers to the good of the child within her womb, she continues the feverish life she has been accustomed to. Late hours, bad air, indigestible food, and overstrain of the nervous system, all combine to depress her health and that of the child to be. A weakling, or even a degenerate child may be born, who will be a lifelong trouble, until elimination through ill-health takes place. The parents of these children often express their astonishment at having weak or degenerate children, and always blame the poor child for being abnormal. It never seems to occur to them that the blame lies on themselves, because they thought more of their own selfish pleasures than they did of the welfare of their own offspring.

Men are just as much to blame as women in this respect. In their greed for gold, or reputation, they frequently undermine their constitution and may do themselves as much damage as the man of licentious habits. It is the poor children who suffer most, born, as they frequently are, too weak to fight the battle of existence. Some quite well-intentioned men undermine their health in their anxiety to provide for their family. What they do not realize is that health is worth more than much gold. On the whole, it is more important for the mother to be healthy and wise, because the nourishment of the

child after conception is dependent entirely on her.

You can now realize that even in modern times and in spite of our ridiculous social arrangements, the fittest survive, while a large proportion of vicious, dishonest, immoral, stupid and lunatic people die out.

CHAPTER VI.

EVOLUTION AND EDUCATION.

EVOLUTION produces inequality, but it also demands equality of opportunity, so that the best men can rise to the highest positions, and give to the nations the benefit of their brains.

The lower animals have to trust to instinct without education. They are, in that respect, at a great disadvantage compared with man. An instinct may become obsolete through a change of environment thousands of years after it was acquired, and when beneficial may be absent in some animals.

Many people are under the impression that education increases the size of the brain. That is a fallacy. Everyone inherits a certain amount of brain, which varies through wide limits, and all the education in the world will never turn a stupid brain into a clever one. If education is forced too much, the brain may be actually damaged by it. If, on the other hand, it is applied in a scientific manner, the brain is strengthened and can be developed to its full capacity. This capacity varies within very wide limits, even in a highly

civilized nation. In the United States, for instance, the negro children receive the same education as the white, but they cannot profit by it—they mostly become hewers of wood and drawers of water, or adopt other menial occupations.

That being a fact, you can see how futile it is for a State to squander huge sums in trying to educate the mass of the population up to the standard of the minority with exceptional brains. The law of the survival of the fittest should be followed. Those in the primary schools who show the most intelligence (not necessarily by hard work or by examination) should be selected for the secondary schools. All teachers at schools ought to understand more about children, so as to recognize the precocity of the degenerate children whose progress comes to a standstill in their 'teens, from the solid and perhaps somewhat dull boy whose progress will continue into middle life.

From the secondary schools a further and stricter selection should be made and the best of the candidates sent on to the Universities. Great care should be exercised to unearth any particular talent that may show itself in individuals.

In this way the democratic ideal may be realized, so that every boy knows that he may be carrying the portfolio of a Minister of State in his satchel, just as every soldier in

Napoleon's armies might be carrying a marshal's baton in his knapsack.

One, then, of the chief objects of State education should be to enable the boy of character and ability to rise to the highest offices in the kingdom, no matter what his birth has been, whether prince or peasant—in fact, a survival of the fittest.

The success of a State depends largely on obtaining the best brains to lead it.

What objects have we in view in general education? We think our object should be to develop the moral, intellectual and physical qualities of every individual, to acquire knowledge so as to enable them to survive in the struggle for existence.

We will consider private education first.

Our public schools are very successful in two respects: they turn out boys who are well ground in morals, and of a well-developed physique. In other words, they learn to play the game and are generally honest and honourable, perhaps the two most important qualities for the success of a race backed by a healthy physique. But when we come to the intellectual development, we are faced with failure. Most of these boys brought up on a classical basis are well up in the back numbers of the book of human knowledge some two thousand years old, but are totally uneducated in the subsequent developments. Many of them know nothing of the air they breathe, of the

food they eat, of the earth they stand on, of the animal and vegetable life that surrounds them, or of the laws of Nature that govern their existence. It is not surprising, then, to find thousands of these young men occupying positions, both here and in the Colonies, below those of the class beneath them. Those who do succeed either have influence or privilege to help them, or exceptional brains which enable them to succeed in spite of the defects of their education.

When you survey the great mass of modern knowledge, you begin to realize how important it is that no time should be wasted over unnecessary and narrow subjects like those of dead languages. If there is any great merit in the writings of Greek and Roman authors, they can easily be translated and the cream of them collected into a small textbook for purposes of education. Latin as a part foundation of many languages has some uses for study, but not to the extent of claiming half the scholar's time, to the exclusion of nearly everything that is of importance to him. The aim should rather be to familiarize the scholar with those Latin words which are of use to-day in the learned professions. The time saved from the dead languages should be expended on learning some of the modern languages that will help the boy in his career, but more important still is a good foundation of scientific knowledge. For success in

medicine, in the Navy and Army, in engineering, in architecture, and in every kind of manufacture, and also for farmers, a scientific knowledge is essential. Still more important is it for Government officials, who, without it, may do great harm to a country by offering an active or passive resistance to progress. Those only who can do without it are the least important to the State, viz., the non-producers or middle-men. It does not require any great brains to buy an article at 6d. and sell it for 1s.; whether this is done by a petty huckster or a colossal stores, there is very little difference.

All boys and girls should be familiarized with the laws of hygiene and health. And at puberty every boy and girl should be enlightened on the important questions of sex functions, prostitution, the risks of venereal disease and its effects. This should be taught by Doctors of Medicine—a man for the boys and a woman doctor for the girls.

The number of lives that are ruined annually through ignorance of this subject is appalling.

The class which knows least of the laws of Nature, which are the laws of God, are the Clergy. As these men are generally at the head of most private and public schools, we have an explanation of the extraordinary ignorance displayed by young men who are supposed to be educated.

Teaching science means teaching and

explaining the laws of God. Not the least of these are the laws of Evolution, which govern everybody's existence. They (the laws) bring home to the mind of the student the necessity of progress. The nation that cannot evolve is in course of time doomed to extinction. It is therefore essential that the boys who will eventually be most likely to rise to the chief positions in the State, whether through merit or by influence and privilege, should realize the enormous importance of not offering any resistance to progress.

We might quote hundreds of instances to demonstrate what a dead-weight in this respect on the development of the nation has been produced by a failure of proper education in the past.

No one will deny now that mechanical road traction is of the greatest benefit to humanity. A hundred years ago the problem was solved by steam, and vehicles were actually running on the roads when a non-progressive House of Commons legislated them out of existence. Everyone is agreed that the railway is perhaps the most potent of all the civilizing influences in barbarous countries, yet when Stephenson, less than a century ago, brought forward his proposals, he was laughed at. Why is it there is no statue to this great man in Whitehall or Trafalgar Square?

It is highly important not to burden the

minds of the young with too much detail. Every subject could be treated from two points of view. One in which general principles only are taught, and the other which goes into details! The pupils should be studied with a view to determine their bent of mind and capacity, and the career which is most likely to suit their temperament. When the direction of this is arrived at, the subjects necessary should be exhaustively studied, while, on other subjects, only general principles should be taught.

The physical education in public and private schools is ensured in England by love of outdoor games, and no training could be much better. One most important result is that football, cricket, and the rowing eight, teach the boy to play for the team and not merely for his own honour and glory. There is, however, one fatal flaw in our system. Every nation sooner or later may have to defend its country against the wanton attacks of another. It is therefore absolutely essential that every boy should also be trained in those exercises which will enable him when grown up to defend his women, his home and his country against a foreign aggressor. It is absurd and suicidal for a democracy to object to this for fear of their Government becoming a military autocracy. When all the lower orders are trained to arms it would be all the easier for them to combine and destroy an auto-

cracy. Still more is it essential for the democratic countries to be trained to arms, so as to prevent any foreign autocratic-governed country from smashing them and making slaves of them.

It is also very much to the benefit of every country that young men should undergo a period of discipline and physical development. Even if a whole year is devoted to this purpose it is time well spent for any growing lad, and if the training is properly carried out he is better equipped for the struggle for existence, both morally and physically, than those who have no military training. It would also reduce the number of hooligans and wasters who hang about the streets, and finally join the submerged tenth.

Some six thousand years ago the Radical ruler of ancient Sumeria, Urukugina by name, reformed his country and abolished the abuses of the secular officials and priests, and gave justice to the working classes, but he failed to keep up his army. As a result his capital was laid in ashes and himself and his people were killed or reduced to slavery. What good then were his reforms?

Many of the foregoing remarks apply also to the system of State education for the masses.

The great principle in State education is to give to each boy the education which he deserves. Bearing in mind the Law of

Inequality produced by Evolution there would have to be a continual sifting of the best boys from the primary schools to the secondary, from the secondary to the tertiary schools and finally to the university. By this means the great expense of a proper education for the masses would not be so great as it would appear.

One of the most important subjects for the education of the masses should be a short course on the principles of political economy to lads between 20 and 21, and also to women between 29 and 30. This should include the fallacies with regard to capital spread abroad by anarchists. The unworkability of the theories of extreme Socialism. The dependence of wage-rates on foreign competition. The injury done to all wage-earners by a high rate in one section. For instance, if the coal-miners are paid high wages the price of coal goes up and every working-man has to pay more for his coal. This teaching should be confined to facts that cannot be contradicted. No man or woman should be allowed to vote until they have mastered these elementary propositions. If this were done it might be possible to avoid the decay which has in the past overtaken so many democracies, and of which there are signs to-day in Great Britain. It would also reduce the number of strikes, and help to prevent the working-man from being led astray by the paid agitator.

In some respects the education of women should differ from that of men. Those girls who display masculine qualities and wish to compete with men in professions and in business should be educated on the same lines as boys, and the same method of sifting out merit could be carried out. For the vast majority of women with feminine qualities a different system is required.

The most important women to the race, the State and society are those who marry and produce *healthy* children. All other careers for women fade into insignificance in comparison. All other work but this can be done by men if necessary. By far the most important part of a girl's education therefore should be to make her efficient for the crown of glory to which her natural instincts lead her, the profession of wife to the man of her choice, and a mother of healthy children.

One of the most astounding defects of our present system is that no girl receives any education by the State on what is absolutely her most important rôle in society.

Every girl should be thoroughly trained in domestic economy, and also in motherhood by the State. The appalling infant death-rate which now disgraces the community would very soon come down. When the working-class woman is married, has to cook her food and clean her own house, and is further weakened by bearing a child, she has neither

the time to attend motherhood centres nor the mental energy to learn.

It is *before marriage*, not *after*, that this knowledge should be acquired. Further than this, in teaching motherhood, a good opportunity would be afforded to a woman doctor to warn the girls against the risks and dangers of sexual looseness, &c., of the physiological laws that govern the birth of healthy and diseased children, of venereal diseases and their consequences, of the laws of Evolution which govern these matters.

No woman should be allowed to marry until she has gained a certificate of proficiency in domestic economy and motherhood.

Is it any wonder that the working-man goes to the public house for consolation when the young wives of the vast majority commence housekeeping totally ignorant of their duties as a wife and future mother?

Is it not natural that the working-man should drink too much when he is obliged to stand at a bar and must either go on drinking or leave the warmth, brightness and company of his mates for the outer cold and untidy home of his uneducated wife?

Let the prohibitionists reform these matters first before they attempt to deprive the working-man of his beer.

In the secondary schools for girls, in addition to domestic economy and mothercraft, other useful knowledge ought to be taught,

so that every girl can earn her living. In this way she would not be driven into a loveless marriage or prostitution, but could afford to wait for the opportunity to meet the man of her choice.

There are many avenues of employment for the feminine woman if she is trained to do good work, such as dressmaking, millinery, typewriting, shorthand, music and painting, secretarial work, gardening, motor-driving, as well as domestic service and cooking.

More important than all is the moral and religious training of boys and girls.

All sectarian schools ought to be abolished. There are two main objections to them. In the first place, the system of education is made to agree with the dogma of the sect, and as there are many sects, the education is confusing, and in some instances is actually untrue to known historical facts. In the second place, the object of the State should be to reconcile religious differences which are perpetuated by sectarian schools, to get rid of the narrowness and superstition which also pervades them. The unhappy results produced by sectarian differences are still rampant in Ireland.

If the Christian sects love one another so little that they are unable to agree on some scheme of religious education to which they can all agree, then the State must do without them. The sects have only themselves to blame for being so narrow-minded. Even if

there were no religious education in the Board Schools, there is nothing to prevent clerics from giving what instruction they like in the homes of the boys and girls, with the consent of the parents.

A great stride forward has been achieved in the last decade or two by the genius of Baden-Powell. Scout law contains as good a moral code as could be found. It has done more good than all the sectarian teaching of all the religions in the world. A higher ideal than Christianity is inculcated. A boy is taught to do good for the sake of doing good, whereas the Christian is taught to expect a reward in the next world, and his mind is often obsessed with the selfish motive of saving his own soul.

The State might do much worse than adopt scout law as its moral educator, supplemented by some of the facts of the Divine laws which govern competition and the survival of the fittest.

General education is, to a great extent, wasted, unless boys and girls are thoroughly imbued with moral principles. In the struggle for existence and the survival of the fittest, the most important quality is morality (using the word in its widest sense), whether applied to individuals or to nations. At the same time, we must not run away with the idea that teaching morality, whether by means of the dogmatic religions or by means of a system

of ethics, is going to regenerate the human race. The chief factor in the production of morality lies in God's laws of Evolution, because the immoral are not the fittest to survive in the struggle for existence. This law of the Deity is constantly interfered with by our sentimental society, which helps the unfit to survive instead of helping them to die out. It is this fact which explains why the world is still so bad, in spite of the sublime systems of morality which have been taught for some six thousand years by various religions. Nor do we expect that the religion of Evolution is going to produce any sudden alteration, but we do expect that the sum of human happiness will be considerably increased when people realize the laws of God (or as they used to be called, the laws of Nature) which govern their existence, and when the lunatic, the drunkard, the confirmed criminal, the degenerate, and the feeble-minded are prevented from breeding and leaving descendants to inherit their qualities.

CHAPTER VII.

EVOLUTION AND THE DOGMATIC RELIGIONS.

THERE is nothing more difficult than to take up an impartial attitude towards any subject. Our early training and education, the opinions of our family and of our friends, all exert an influence over our thoughts and our beliefs. It is still more difficult to be impartial on religious questions.

I shall therefore ask you to imagine you are a being from one of the other one hundred million worlds, knowing nothing about the various religions of this our earth. That you are able to pay a visit to this planet of ours, in order to study the various religions, with a perfectly open mind and quite free from any prejudice, and to submit each religion to a merciless analysis, your one and only end in view being to arrive at the TRUTH.

In the first place, there are the dead religions of Babylon, Egypt, Rome, Greece, and Persia, and a great many others besides. Why did these religions die out. Because the empires they inspired died out, or because they were incapable of evolution and could not adjust themselves to the mental progress

of mankind, and therefore led to the downfall of the empires they tried to elevate? A volume might, with interest, be written on the subject, but we think that the second of these reasons is the one which accounts for the death of these ancient religions, and also of these ancient empires.

Of the many present religions of the world, we need only consider the three chief faiths, Buddhism, Christianity, and Mohammedanism. Before taking each in detail, let us contrast them in their general aspects.

Priests who wish to make their followers fully realize that their particular dogma is the one and only road to the favour of God, are very fond of pointing to the many millions of the faithful, as a proof that the dogma must be correct. As a matter of fact, there are about as many Mohammedans, and perhaps more Buddhists than Christians. In Europe, something like half the population is not Christian and never enters a church; they are really Rationalists and cannot accept the out-of-date and unprogressive dogmas of the Churches.

Numbers then do not help to throw any light on the subject. They only emphasize the fact of how easy it is to have faith in something which is false; for if one only of these religions can be right, then we have the spectacle of hundreds of millions of people of the other two faiths holding beliefs which are false. So much for faith.

Priests in all ages and climes have preached the virtue of faith as one of the greatest. They have been obliged to do this because they are unable to give any definite proofs of the dogmas they advocate. If one of these religions is the true one, then all the superstitions of the other two are false. It is necessary for you to realize that faith without evidence is not a great quality, but quite the reverse. It is a prominent characteristic of the stupid, undeveloped mind of ignorant savages and cannibals. In Fiji, and also in West Africa, there are tribes of savages who believe that in the next world they will always remain at the age which they had attained when they died. So great is their faith in this, they actually arrange with their relatives to put them to death at about 40! A favourite method is to bury them alive. You could hardly have a greater faith than this. When therefore a priest tells you to have faith, you may well reply that only fools and savages have faith without evidence.

Another argument often used by priests is to point out that a religion must be true because it has lasted for many hundreds of years. If we are to take duration of time as a proof of verity, then we must award the prize to the Ancient Egyptian religion, because it lasted five thousand years. Buddha would take precedence of Christ by six hundred years, while Mohammed would

have to take a back place with a duration six hundred years less than Christ. The duration of a religion will depend on the evolution of the people who believe in it. As their intelligence improves, they will demand proofs from their priests of the statements they make. We see the result in Ancient Egypt. Although a very good religion, with high moral precepts, and free from the human sacrifices and other bloodthirsty rituals of the Old Testament, it has entirely passed away, except the idea of the Trinity, which has been grafted on to Christianity. With the development of intelligence, all religions, sooner or later, undergo disintegration. The superstitions which bolster it up are unable to exist when exposed to the light of Rationalism. At the present day, we see this disintegration going on among the Christians, as one dogma after another is proved to be erroneous.

There are three main dogmas in Buddhism. A very high moral code equal in all respects to that of Christianity, a belief in the soul, and of future punishment for the wicked. Instead of the Christian hell, where the damned are forever to remain, the soul of the wicked man is supposed to pass into one of the lower animals. During this period, the karma has an opportunity of improving and may after death pass on to one of the higher animals. After many transmigrations, the very good soul of perfect life ultimately

attains Nirvana where pain and all sensation cease.

Buddha effected a great reform in Brahminism, by preaching brotherhood and benevolence to all men, even those of the lowest castes.

The rigid caste system of the wily Brahmins, by which they managed to retain their power, is the very negation of evolution. We see the result in India to-day. The British, an alien power, rule over the Brahmins, although they were civilized thousands of years before us. Men are undoubtedly unequal, but at the same time it is impossible to give free play to the law of the survival of the fittest, unless every man has as much as possible an equal chance of rising. Under the caste system this is impossible.

A great defect is the idea of resignation to the ills of this world. It is even more paralysing than the Christian and Moham-medan idea that the Deity is constantly intervening in the affairs of man. As a natural consequence, many of the best men among the Buddhists by withdrawing from active life and giving themselves up to the contemplation of their future existence, are actually doing harm to the human race by abstaining from leaving a family. They might by studying the real laws of God, which are the laws of Nature, help to abolish disease and other defects of suffering humanity. Instead of

accepting misfortune with resignation, the student of Evolution realizes that the Deity has endowed him with intelligence and energy, which He expects him to use so as to overcome disease and the other ills of life.

Buddha quite failed to realize that women are as important to the human race as men, although they are obliged to depend on men to a great extent during the child-bearing period. If women are given their liberty, the abnormal, the vicious, and the degenerate are eliminated in the struggle for existence, whereas they are preserved by the harem system, and thus continue to taint the race.

Another fault of Buddha was to advise his followers not to make any provision for the morrow, but to trust to alms. In this respect, he anticipated Christ and His followers. If everybody followed this advice, the whole world would be beggars, no one would have anything to give, and starvation would follow. The lazy priest or monk of the Buddhist religion is merely a parasite on the rest of the community. Thinking only of his own selfish soul, and living an idle, lazy existence by sponging on his fellow men, he is not even the equal of the lowest caste of peasant, who honestly earns his bread by the sweat of his brow.

Many attempts have been made to harmonize Evolution with Christianity, but the rigid attitude of the dogmatic Churches has made this quite impossible.

No one can say exactly what Christianity is. In addition to the Roman, Greek, Anglican, Lutheran, Presbyterian, Baptist, Congregational, Nestorian, Armenian, Coptic and Abyssinian Churches, there are a host of others, all holding different opinions. Can any intelligent person believe that a Divine revelation could give rise to such an extraordinary difference of opinion? A difference which led those who were enjoined to love one another, to massacre each other, and to burn their opponents alive at the stake.

Although it is impossible to define Christianity, the different sects are more or less agreed that their various dogmas are founded on the Bible. Even the Roman Church stated in the Encyclical and Syllabus of 1864 amongst other things: "This supernatural revelation as declared by the Holy Council of Trent is contained in the books of the Old and New Testament as enumerated in the decrees of that Council, and as are to be had in the old Vulgate Latin edition."

Anyone who makes a study of the Bible can understand why soon after the death of Christ quarrels began among the Christians; a text can be found to support almost any opinion, and another text can be found to contradict it. Quarrels, wars, bitterness, massacres, burnings at the stake, materialism and hypocrisy, have disgraced the Christian Churches from the earliest times down to the

present day, when the bitter disagreements over education in England are still unsettled.

The Bible consists of a series of papers written by various authors whose names are to a great extent unknown. These were collected by priests, and at certain councils some of these writings were selected by these men and declared to be the voice of God. The opinion of any other council of educated men that these writings are *not* inspired is just as good and should have just as much weight.

Taking the Old Testament first, does it show any evidence of Divine inspiration? The main thesis of Christianity is: "The fall of man and original sin, to recover from this it was necessary for God to send His Son in order to save men from Hell fire."

This fall of man is described in the first chapter of Genesis. Of its truth we have no evidence beyond a written statement.

Evolution, on the contrary, can produce absolute evidence that instead of falling, man has done the exact opposite. In other words, man has slowly but steadily risen up from among the brutes to a spiritual and intellectual pinnacle, from which he dominates both the animal and vegetable kingdoms and even controls many of the forces of Nature placed at his disposal by a beneficent Deity.

Perhaps the most repulsive element in the story is the horrible libel on the Deity. He is supposed to have created man with the

defect of disobedience, and when the poor man disobeys a trivial order not to eat a certain apple, the man and his millions of descendants for ever afterwards are the victims of a terrible curse.

No intelligent man would ever believe such a fable, but it is still solemnly read out in every Christian church as Holy Writ and the inspired Word of God. Even some of the clergy admit in private that the whole story is a fable, but none of them have the courage or honesty to say so when they read the chapter in church.

For eighteen hundred and fifty years this story was accepted in its entirety, and anyone who dared to question it was assailed on all sides and called a blasphemer, and in the Middle Ages was burnt alive.

It was only when that great man Darwin demonstrated to us the real origin of man the Christian Church shifted its unstable foundation, and some of them agreed it might be a fable.

"God is Love" is one of the favourite statements of the present-day Christian priest; at the same time he asks us to accept as inspired by the same Deity the following statement: "Thus saith the Lord of Hosts, I remember that which Amalek did to Israel; how he lay in wait for him in the way when he came from Egypt. Now go and smite Amalek and utterly destroy all that they have

and spare them not; but slay both man and woman, infant and suckling, ox and sheep, camel and ass." (I Samuel, chapter xv, verses 2 and 3.)

Why should we denounce the Germans for atrocities if we believe that God Himself ordered the wholesale murder of the women and children of Amalek? This is merely one instance out of many in which the Deity, or His chosen representative in the Bible, simply wallows in blood. David, held up for admiration by the supposed inspired writer of Samuel, chapter xxvii, verse 9, was as bad as any Hun: "And David smote the land and left neither man nor woman alive and took away the sheep and the oxen and the asses and the camels and the apparel and returned and came to Achish."

How can the bishops and clergy expect the intelligent man to go to church when this is read out to him as the inspired Word of God?

If the Books of Moses are inspired, why did they say nothing about a future existence? Did none of the ancient Jews have souls?

Some of the Mosaic law is retained by the Churches—for instance, the Ten Commandments—but a great deal is now rejected; but if it is the Word of God, why is it rejected? How can the Churches expect us to believe that the Great Almighty would vacillate and

change His mind like the shifting sands of human belief. Do you not realize that the real laws of God, the laws of Nature, are eternal, and never change, that the law of Evolution has been going on for millions of years? Why try to bolster up these contradictions by saying that the Deity issued a new dispensation?

Can anyone believe that man is made in the image of God when we know for a fact that man is made in the image of the man apes? Further we know that both men and women, in respect to the organs of reproduction, are made the same as the beasts in the field, and that the processes of reproduction, growth, and birth, and suckling of the offspring are the same. Is it possible that you, an intelligent person, can believe that the Deity, Who rules over a hundred million worlds, is as low in the scale of physiology as the beasts in the field? Does it not even strike you that it is an absurd statement to suggest such a thing, and that the author of the statement must have been a megalomaniac of the worst type?

The picture drawn of the Deity is also impossible of belief by any sane man. It was only by constant sacrifice that He could be kept in good humour. Even human sacrifice, that of the first-born, was required, like the Ju-ju monster of Ashanti. This was followed by holocausts of animals, the stench of whose

blood was stated to be grateful to the nostrils of the Great Almighty. Our Churches still retain the barbarous altar, but why give up the sacrifice, if the Old Testament is inspired by God? Are we to suppose that the Great Almighty has changed His mind? Can we believe that the Deity, if He had created man imperfect, would punish him in the awful way depicted by the Jewish chroniclers, with plague, famine, fire and sword? If some of the clergy do not believe this, then why call the Old Testament Holy Writ inspired by God?

Evidently the Jews, and also the modern Christians, look upon the Deity as a being who is not only cruel and vengeful, but also as a mass of vanity. Why else should so many portions of services and ritual consist of fulsome flattery and sycophantic adulation? Even a mere man with a well-balanced brain would be disgusted at this, how much more then must the Great Almighty ignore such triviality?

Very few people realize how much harm has been done by the belief that man is made in the image of God. No one who really believed this would like to dissect the human body; consequently in the whole Bible there is not the slightest indication to poor suffering humanity how to treat disease, or how to prevent it. During the first sixteen hundred years of the Christian era, not only was nothing done to understand disease, but the

Christian Churches actually opposed any efforts in that direction, considering it impious to examine into the structure and working of the human body *made in the image of God*. During that period of Christian darkness, plague, cholera, typhus and other diseases swept over Europe. It was not until the spiritual soul of Rationalism shed the radiance of its light into the dark recesses of Christianity and drove out the hideous spectres of superstition, that any amelioration took place.

Another statement in the Old Testament: "Thou shalt not suffer a witch to live" (Exodus, chapter xxii, verse 18), was the cause of shameful cruelty and suffering to tens of thousands of poor innocent women. This persecution, which went on until the eighteenth century, was not by any means confined to the Romanists. The Reformed Churches, and in particular the Presbyterians, were quite as zealous in hunting out witches as any other ignorant and cruel Christian sect. An Anglican minister, John Wesley (later a Nonconformist), speaking in 1768 against the opposition of Rationalists to the burning of witches and the belief in witchcraft, stated: "They well know (whether Christians know it or not) that the giving up of witchcraft is in effect giving up the Bible" (Lecky, "Rationalism," I, page 124).

How thankful we ought to be to the

Rationalists that through their exertions this superstitious and shameful practice of the Christian Churches has been allowed to drop into oblivion.

But the verse quoted is still in the Bible and is still read in church as Gospel truth : none of the clergy have the honesty to repudiate it, although none of them now believe it.

One can hardly realize the mental condition of the clergy of all creeds who, after a thousand years of Christianity, should take a verse of the Old Testament, even when they believed it was God's Word, and credit a lot of inoffensive old women with a power of altering Nature's laws. One can understand men believing that the Great Almighty might interfere with His own laws of Nature, but to attribute to a lot of old women such a terrible power is absolutely childish. It only shows how very little we are removed from the ignorant savage, and the witch-doctor of the Zulus.

A belief in witchcraft was one of the stumbling-blocks in the way of progress and delayed the evolution of our race. Instead of trying to elucidate the causes of disease in men and murrain in cattle, it was much simpler to accept a statement made by some ignorant and barbarous ancient Jew, call it the Word of God, and burn alive harmless old women as witches.

Very much worse than witchcraft is the belief that the Great Almighty is always interfering with His own unchanging laws and the affairs of men (see Chapter VIII). Even the best Christians now have their qualms of doubt embodied in the saying that "God helps those who help themselves." Common-sense is at last beginning to permeate the mass of the people and even the clergy, one of whom when asked by an English farmer to pray for rain, replied that it would be useless while the wind is in the east!

I have no hesitation in saying that this belief of Divine intervention, so strongly inculcated by the Old Testament, has done more harm to the human race by preventing God's law of Evolution, than all the other books in the world, except the Koran. The causes of disease might have been elucidated thousands of years ago, and the spiritual side of man might have become refined instead of remaining brutalized, until Rationalism made mankind ashamed of itself. Was not the Old Testament taken as the authority for the persecution of any sect that differed from the dominant Christian Church. Think of the awful persecutions of the Pagans under the Roman Emperor Constantine, of the brutal acts of the Roman Catholic Church since then. The massacre of the Albigenes, when sixty thousand people perished. This is the number given officially in a Bull of Pope Pius V. The

persecution of the Vaudois or Waldenses, when thousands of these poor people, deprived of all their land and goods, were left to perish miserably in prison of hunger, want and disease. Our Lollards here in England burnt at the stake. The persecution of the Huguenots in the sixteenth century in France, culminating in the awful and treacherous massacre of St. Bartholomew. These victims, when the streets of Paris ran blood, were actually assassinated wholesale, without trial or notice, and in nearly every case were surprised and unable even to defend themselves against superior numbers.

Worse, perhaps, than anything, was the infamy perpetrated by the Inquisition of the Roman Church. We doubt whether in the history of the world any tyrant has equalled this Christian tribunal in cruelty, callousness, injustice and hypocrisy. The officers of the Inquisition could arrest anyone that they liked without giving even a pretext. The poor prisoner could be kept in a dungeon without any reason being given. He was not allowed a lawyer or anyone else to defend him, or see him; he could not call any witnesses on his own behalf. The judge who tried him also prosecuted him. Unless he confessed, he was put through the most horrible tortures, and what was left of him was burnt alive at the stake by the secular authority at the command of the Christian

Inquisition. All his property was confiscated, his wife and children were treated like pariahs. Even the bones of persons long gone to their graves were torn from their resting place, thrown to the flames, and their descendants deprived of their property, if evidence could be found to convict the deceased of heresy. Llorente states from the records of the Inquisition itself, that 341,021 persons were condemned in Spain alone. When the French troops of Napoleon entered Toledo in 1808, they burst open the prisons of the Inquisition and liberated the prisoners. Most of the poor wretches were more like corpses than living beings. Even army officers accustomed to see dreadful wounds on the field of battle, were horrified at the devilish cruelty of the machines used for torture. In the Netherlands, under the Spanish rule, probably nearly as many were done to death by the Inquisition. The sturdy Dutch frequently rebelled, turned the tables and eventually drove them out.

After the revocation of the Edict of Nantes, by Louis XIV in France, the Huguenots were again harried, persecuted and hunted down like wild beasts. Many of them found an asylum in England, much to the advantage of this country, in fact, many of our arts and industries were first started by the Huguenots.

What evidence have we that the Gospels are the inspired Word of God?

The Sinaitic Testament is the oldest in existence, and the date of this copy is generally agreed to be about the middle of the fourth century. The Vatican code comes next in point of age, and both differ in important particulars from our authorized (English) version. The Nicene Council, composed of bishops, is supposed to have decided that these writings were inspired, though why intelligent men of the twentieth century should accept the dictum of a number of ignorant priests of the fourth century I fail to understand. There is no evidence that any of Christ's sayings, or that any of the occurrences of His life were written out during His career. The very earliest date that can be assigned to any written reference is seventy years after the birth of Christ. The evidence of this even is very slender, *for none of these early documents are in existence to-day.* We do not even know for certain who wrote the Gospels, or when they were written. Instead of the Christian Church being built on a rock, it is a huge superstructure raised on sand. It is well known to all historians that it is childish to trust to tradition, even after a few years, so much are statements altered as they pass by word of mouth from one person to another.

Taking the Gospels as they are presented to us by the priests as the Word of God, will an examination confirm or dispel that statement, of which no priest can offer any real evidence? Let us see.

In the first place, the four Gospels do not agree in many particulars, occurrences which are described in one are omitted in another. Their dates do not agree, their genealogical tables differ. According to John, the ministry of Christ lasted three years; according to the other Gospels it was only one year, and there are numerous other discrepancies besides.

The idea that the Deity had a Son by a woman on this earth of ours will to many pious modern people be a horrible idea, whether the conception was maculate or immaculate.

We know that among the multiplicity of ancient gods, many of them are supposed to have had children by captivating women, but can any intelligent man imagine the Great Almighty, who rules over a hundred million worlds, uniting Himself to a woman on this little speck of a world in the immensity of space. In the Epistles of Paul, Peter, John, James and Jude, there is no mention of a miraculous birth of Christ, nor in Acts. Jesus himself never refers to any marvellous occurrences at his birth. It is distinctly stated that he was without honour in his own family. Could this have been possible if His mother had formed a union with the Great Almighty, and if all the portents at His birth had really taken place? In addition to this, the Gospels are most anxious to show that Joseph was descended from David. If God was the Father of Christ, what matter the ancestry of Joseph?

There can be no doubt that Christ was a very remarkable young man. If he had waited another twenty years before delivering His message, we fancy it would have been very different. He no doubt observed, as we do now, that the interpretation of moral laws was too rigid and wanting in spiritual charity. An investigation into the ethical principles of Buddha, of Ancient Egypt, and of the classical Roman and Greek philosophers, shows that there is but little difference between them and those of Christ. (See the "Sources of Morality of the Gospels," by Joseph McCabe. Watts and Co.)

These differences we propose to consider. The most remarkable phenomenon in Christ's mind, if the Bible statements are true, is its curious duality. That He with His broad charity and high standard of ethics should believe like any poor benighted savage that man can be inhabited by demons, is to say the least of it remarkable. Most savages believe that disease is caused by a demon entering into the patient, and their medicine men drive them out, just as Christ did. When some of these demons were given permission to go into the Gadarene swine, He offended against His own teaching. If Christ had been one of the owners of the swine, would He have liked to see His property destroyed? It was quite simple for Him to send the demons to Hell instead of into the swine. In

the former case, He would not have broken His own ethical law, that one should do unto others as one would be done by.

The rational study of God's real laws governing disease has enabled the modern physician and surgeon to save millions of lives and much suffering, compared to which the handful of cures by Christ is but a drop in the ocean. If Christ was really the Son of God, we cannot help thinking He would have given us a divine revelation on the subject of disease, or a hint that the microbe should be sought for, instead of leading us astray for seventeen centuries with a belief in demons. Think of the enormous amount of pain and suffering He could have prevented in the last seventeen hundred years.

He threw no enlightenment on the Jewish fallacy that man is made in the image of God, or told us that man is made in the image of the man ape, nor did He contradict the childish myth about Adam and Eve. There is not a hint or a word about God's law of Evolution.

Josephus, the Jewish historian, who was born about seven years after the death of Christ, merely mentions Him, but gives no record of any miracles, or of anything miraculous at His birth or His death, although Josephus was actually Governor of Galilee, the very site of Christ's birth and ministry.

"Love your enemies, bless them that curse

you, do good to them that hate you" (Matthew v. 44). "Forgive men their trespasses."

Christ himself having given this advice, failed to carry it out. When He describes His second coming and the Judgment Day (Matthew xxv), the good and the bad are separated into two groups, but instead of loving and forgiving those who have not agreed with Him, He states, "Depart from me, ye cursed, into everlasting punishment, prepared for the devil and his angels." Even a Rationalist would hesitate to consign his worst enemy to everlasting punishment.

In Luke x, Christ threatens several cities who refused to receive his message with a fate more awful than that of Sodom, while the city of Capernaum is to be thrust down into Hell. Why did He not forgive these cities who were opposed to Him?

In the interests of the race and Evolution, the moral man should thrash his immoral enemy first, and then forgive him.

"Resist not evil, but whosoever shall smite thee on thy right cheek, turn to him the other also" (Matthew v. 39).

If this advice was carried out, Evolution would come to a standstill, and we should revert to the savagery of the prehistoric man.

Neither the people who call themselves Christians nor their priests and ministers ever dream, in modern times, of following this

impossible injunction. If a man, for instance, robs a Church, he is promptly arrested and given a term of imprisonment. What would have been the result if we had turned the other cheek to the Germans, instead of hitting back? Such an injunction is impossible to carry out.

How any priest or clergyman can read this out in church, and then in practice do the exact opposite, passes most men's comprehension.

If we followed the advice given in these verses, we should have to do away with our police. The forces of criminality and anarchy would gain the upper hand, and no moral man with ideas would be able to call his soul his own, and would be lucky if he were not murdered. The streets would run with blood, vice and brutality would predominate, progress would disappear, liberty would fall from her pedestal, swept away by the tyranny of evil.

How anyone can believe that the Great Almighty ever gave such advice as "Resist not evil," is quite beyond us.

One of the great laws of Evolution is the exact reverse of this. "With all your power resist evil, whether in yourself or others." By doing this, you will help to purify and improve the world.

"Take no thought for the morrow," &c. (Matthew vi).

This again shows the duality of Christ's

mind. It is only amongst the lowest savages that this trait is found. Almost the first upward step among them is to provide food for the morrow by trying to raise some kind of rude crop.

In the struggle for existence, it is the people who do not provide for the morrow who are wiped out. God's law of Evolution is utterly opposed to Christ's law, "Take no thought for the morrow."

"Then said Jesus unto His disciples, Verily I say unto you, that a rich man shall hardly enter into the kingdom of Heaven."

"Again I say unto you, it is easier for a camel to go through the eye of a needle, than for the rich man to enter into the kingdom of Heaven." (Matthew xix. 23 and 24.)

Reading this must make us feel sorry for our bishops and cardinals with their incomes of four to ten thousand a year, a palace and servants, &c., and more still for the archbishops with fifteen thousand a year, and a better palace than the others. As for the Popes of Rome, with their enormous buildings and revenues, so rich are they that we may feel quite certain not one of them has ever got out of purgatory. The poor curates and rectors who have to live on a miserable pittance and like Lazarus would be glad of the crumbs from the rich bishop's table, may console themselves that in the next world they, not the bishop, will receive a reward.

If our bishops and cardinals followed the advice of the Master that they are always referring to and profess to worship, we should feel more respect for them. What is to prevent them from following the example of the late General Booth, who controlled an organization a hundred times larger than the diocese of any bishop. Let them live in a house whose rent does not exceed £50 a year, and an office with a secretary and clerk to transact business in addition. The palace could be let at a good rent and this, with the surplus of their income, could be given to supplement the miserable stipends of the poor rectors and curates.

This is another instance of professing a belief, but not carrying it out. The bishops who lay themselves out to tell people what they ought to do, must first live according to the faith they profess.

Evolution on the question of wealth is again at variance with Christian teaching. Any individual, or community, or nation, that does not lay up some of its wealth during prosperity, runs the risk of extinction in the struggle for existence. The poor savage who is obliged to spend all his time in hard labour so as to obtain a bare subsistence, has no energy left to develop his spiritual nature. Without wealth, his tribe will go down, in a fight with another tribe which possesses it, other things being equal. All that makes life beautiful,

morals, knowledge, art, literature, music and science, can only be cultivated, if a surplus of food, &c., in other words wealth, exists. The great conquests of science over disease, the relief and prevention of suffering, the spread of moral codes, the diffusion of Rationalism, the abolition of slums, free education, cheap means of transit, warm clothes and good food for the poor, old age pensions, asylums for the blind, the halt and the lame, hospitals for the sick poor, in fact, all the blessings of civilization are due to wealth and capital, as well as morals. Whatever the socialists may say, capital is an enormous benefit to the poor man. Instead of attacking capital, they should attack its misapplication and wrongful use by the capitalist. This latter can be remedied by legislation.

As a Prophet, Christ not only showed no divine knowledge but also showed that His prophecy was wrong.

After describing His second coming and the end of the world, He most distinctly stated in language which cannot be twisted to mean anything else, even by a wily Jesuit:—

“Verily I say unto you, this generation shall not pass away till all these things be done” (Mark xiii. 30). Unfortunately, hundreds of generations have passed away, and we still seem a long way off the end of the world. Many priests and clergymen, and worst of all, Nonconformist ministers, after telling us

the Bible is the Word of God, will proceed to tell us that the words which the Great Almighty has uttered do not mean what they state. In other words, they know better than God.

The doctrine of redemption through Christ's death is a stumbling-block to many pious men. During the first four centuries there is no reference to the doctrine of the atonement among Christian writers. It was Augustine who first read this meaning in the obscure arguments of Paul. If it was necessary for Christ to die in order to save men from Hell, why did He not appear earlier in the history of the world? What has become of the souls of the hundreds of millions of people who lived in this world before Christ appeared? Are they all supposed to be writhing in Hell? We know for an absolute fact that man has existed for hundreds of thousands of years before Christ. If the Deity is omnipotent, He can forgive everybody's sins if He so wills it. Then why have a Son and sacrifice Him?—surely a cruel act to attribute to the Great Almighty.

The expression, "The Blood of Christ washes away sin" gives a clue to this idea. It is the notion present in the minds of all savages that the wrath of the Deity must be appeased by a sacrifice of some sort, in which the mystic shedding of blood is necessary. Why should the Deity sacrifice His own Son to appease Himself?

Mohammedanism probably embraces more people than Christianity, although it started more than six centuries later. The reason for this is chiefly due to its dogma of force. In the struggle for existence the three qualities which make for survival are morality, intelligence and force. Mohammed recognized this last from the very first, and also the importance of morality. That was one reason why Mohammedanism spread over the world much more quickly than Christianity ; also displaced the Christian religion in something like half the known world of that time. It was more in accord with Evolution.

After a few centuries, the Christian Churches, and in particular the Roman Church, entirely gave up turning the other cheek, used force, and massacred its opponents. In other words, in order to survive it had to give up Christ's teaching.

Mohammed avoided one great defect of Christianity—he never established a Hierarchy. By this means he avoided a great deal of squabbling and divisions which disgraced the early Christian Churches.

Another factor which helped Mohammedanism was that at a time when the whole of Europe under the sway of the Roman Church was steeped in superstition and ignorance, many of the Caliphs shed the coat of fanaticism and developed a temporary enthusiasm for Rationalism. They encouraged any

and every kind of learning and welcomed learned men, instead of burning them. This greatly influenced and improved their art of war among other things. In the struggle for existence between these two religions, the narrow-minded and bigoted Christian went down before the more enlightened Moham-medan. When the more ignorant and fanatical factions of the latter were able to assert themselves, Mohammedanism began to decline. This was still more marked when, in later centuries, the leading men in Christian countries, throwing off the cloak of bigotry and ignorance, openly embraced Rationalism. By uniting in himself the political and religious head of the Empire and in the Caliphs who followed him, Mohammed prevented the dual authority, religious and political, which played such havoc among the Christian nations.

The chief stumbling-block in the way of progress is the belief that the Deity intervenes in the affairs of men and arranges everything that happens. This belief is fostered and emphasized to an extraordinary degree in the Koran and is highly inimical to evolution. As a result, everything like disease, bad roads, bad crops, &c., is put down to the Will of Allah. So nothing is done to remedy these evils. It has been ordained from the beginning! It is a striking illustration of the paralysis produced by a false belief.

Another weak point of Mohammedanism,

which is also found in Christianity, is the failure to appreciate the brotherhood of man. Only the true believers could be saved. In this respect, until the last two centuries, the followers of both religions believed that they alone held the keys of Heaven and Hell.

Rationalism, with its broader view, holds that a man's belief does not matter in the least after his death, but that God will judge him entirely on his heredity and all the circumstances of his life and acts, but not on his belief.

Whether a man be a Christian, or a Mohammedan, or a Buddhist, or a pagan, or an idolater, or anything else, if he has done his duty according to his lights we believe the Great Almighty will reward him.

If a man holds a narrow-minded or stupid belief, he will undoubtedly suffer from it in this world, and will very likely make others suffer as well, but if he is honest in his convictions, and not swayed by mean or sordid motives, we do not believe that he will suffer in the next.

Evolution is also against the seclusion of women. Under the harem system, the weeding out of the women who are vicious, immoral and stupid, is interfered with. The more liberty that is given to women, the better for the race, provided they are educated when girls in the problems of existence, and in particular those problems concerned with sex

matters. As a result of this liberty, the most moral, intelligent, and healthy women will survive in the struggle, and leave children, while the others will die out. Further, the harem system is not healthy for women, they suffer from lack of bodily exercise and mental interest, with a result of lack of vitality and energy in the children.

In the struggle between nations, education in science (which is the study of God's laws of Nature) is of greatest importance, both in peace and in war. If you compare the advantages of an army equipped with machine-guns, quick-firing field artillery, gas shells, high explosive, flame throwers, trench mortars, aeroplanes, observation balloons, tanks and breech-loading rifles, with an army without them, you will understand how the rational nations drive, like chaff before the wind, the poor ignorant fanatics who only teach the Koran in their schools, and rely on Allah and hand-to-hand fighting.

We can find no evidence that Allah ever interferes with his own laws, which are the laws of Nature. Man must rely on himself and his own intelligence. Those who do not do so will die out in the struggle for existence with those who do.

Mohammed's religion was more in harmony with the laws of evolution in one respect than either the Christian or the Buddhist. He held that all men were equal in the sight of

Allah : consequently there are no caste systems or even privileged classes. The most able and efficient are able to rise ; in other words, the survival of the fittest is not much interfered with. This was undoubtedly one of the reasons why the Mohammedans in the seventh and eighth centuries defeated the Christians.

CHAPTER VIII.

THE DEITY AND DIVINE INTERFERENCE.

THE natural tendency of the savage is to put down to the supernatural everything which he is unable to understand. He is tormented with fear of the unknown. If his crops fail, some evil spirit is at work, and the same cause is assigned to disease of himself and his cattle, to the floods from the river, the hail storm, the thunder and lightning, and all the major and minor phenomena of Nature. Considering what a short space of time, only a few thousand years, has removed us from barbarism, it is not surprising to find this belief still held by many millions of civilized people. Everything in the Old Testament is ascribed to the direct intervention of the Deity. Even the cultured and intellectual nation of Ancient Greece, unable to understand thunder and lightning, attributed them to Jove's anger. The same belief permeated the whole Christian era, and also the Mohammedan world, except for the brief period when a wave of Rationalism illuminated the Arab mind.

In the last 200 years the light of Rationalism has shed its rays on these dark recesses of the

human mind, and since then a healthy scepticism has induced men to investigate all phenomena before jumping to the conclusion that they are supernatural.

Even now we are still suffering from this serious defect of the immature mind of the savage. Our law still speaks of the act of God, our Churches still have a form of prayer for rain, while services of intercession still expect the Deity to interfere with the harmonious working of His own eternal laws, at the solicitation of pigmy man. During the Great War, each side claimed the support of the Deity. Meanwhile his laws continued their eternal course unchanged. First our side was impeded by persistent rain in 1917, then the Germans in their great attack in 1918 had all the advantages of fine weather. If the Deity intervenes at all, we might well have come to the conclusion that He was on the German side, until a flood on the Piave River brought disaster on the Austrian armies, and bad weather caused the failure of many of their crops. We can almost imagine the Deity smiling when a few million of little pigmy men ask Him to upset His eternal laws, which rule over a hundred million worlds.

When you realize that this natural defect of superstition in the mind of the ignorant savage was present in our own prehistoric ancestors for hundreds of thousands of years, you can understand why it is still present in

many men of modern type whose evolution is still backward. For the same reason, you find miracles and supernatural happenings described by all religious sects. Any pretence for a miracle has always been gladly seized on by priests, because it helps to bolster up their power over the minds of proselytes. When, however, the light of Rationalism is shed upon these happenings, the evidence shrinks into mere statements which cannot be verified.

There are many reasons why men of intelligence should reject the idea that Divine intervention ever takes place.

If we are to accept the fact that miracles occur, there is no reason why we should accept the statements of any one religion more than another, because the evidence is the same for all. In that case, we should have to believe in hundreds of gods and go back to polytheism.

The student can hardly help being struck by the pettiness of Christian miracles. When the Persians in the sixth century, under Chosroes, overwhelmed Palestine, sacked Jerusalem and polluted the Holy Places, a miracle would have been a great help to the faithful, but none occurred. Nor did any Divine intervention occur when the followers of Mohammed conquered half the Christian world. In fact, there is good reason to believe that the success of the Mohammedans was in great measure brought about by a belief in the

intervention of the Deity preventing the Christians from helping themselves. They were probably also conscientious objectors, who preferred to turn the other cheek and to love their enemies. Looking back over the centuries, we can see the result of this childishness. The Christian dog, as the Mohammedans call him, has been treated worse than a dog for centuries. Ground down under the heel of the Turks, the Christians have paid a hundredfold for their want of rationalism. At the least attempt to gain even a fair measure of liberty, they were massacred wholesale, their wives dishonoured, and their daughters sold. Even to this day, the Armenian Christians are going through this same awful experience. Such is the result, and always will be the result of people who hold false beliefs, when tried in the furnace of evolution, from which only the fittest survive.

If it had not been for the rise of Rationalism, the British Empire would have gone down under the heel of Germany.

If you investigate the real laws of the Deity, you will find that they are quite impartial in their action. Lightning strikes churches quite as much if not more than other buildings on account of the high steeples, unless a proper lightning conductor is put up. It is a sign of grace that most priests now trust the lightning conductor in preference to Providence.

Earthquakes also show no discrimination ;

the good and the bad, the church and the music hall, the vicarage and the brothel, are all destroyed together. In the recent earthquakes in Italy many devout people were actually killed in the very act of taking the Eucharist.

On the other hand, disease in the shape of epidemics, such as cholera and the plague, do exercise a certain amount of selection due to natural laws. The glutton when he swallows some cholera germs, called the comma bacilli, is more likely to fall a victim to the disease than an abstemious man. This applies also to the citizens of those towns who are either too ignorant or too mean, or corrupt, to expend the sums necessary to procure a pure water supply and prevent contamination by sewage.

Again the plague, which is conveyed by the fleas of rats suffering from the disease, killed off the dirty people who allowed vermin to infest them. One reason why we now have no holy hermits and ascetics is that these misguided people were extremely fond of wearing a permanent hair shirt, which would invariably become infested with fleas. As soon as an epidemic of plague occurred, they would be among the first to become infected and would die out. God's law of evolution had no use for these good but stupid people. In all other respects the disease showed no discrimination: the good and the bad, the immoral and the moral, were all killed off

together, if they were infested with fleas infected from rats. History shows that in the fifteenth century the pneumonic form of plague was probably recognized, because people used to go about with a piece of camphor in their mouths to prevent infection.

In the last three years, 1914 to 1917, plague has invaded England on two occasions, and the people of this country owe a great debt to the Rationalists of the medical profession who have saved them from a similar destruction to that which occurred in the fifteenth century, when the population was decimated, and so many people died in some places that there were none left to bury them.

You can now realize, to some extent, the awful amount of harm done to the human race by the Christian belief in Divine intervention. Nothing was done to tackle disease during the first fifteen hundred years of Christianity, except by a few isolated men of science, because it was considered impossible to prevent the Divine wrath. An equally pernicious belief that man is made in the image of God, instead of in the image of the man apes, prevented any study of the structure and working of the human body. However, things have improved, for although the Pope and the priests encourage the faithful to rely on the miracles of Lourdes, the former takes good care to call in his physician as soon as he feels unwell, rather than trust to a miracle to restore him to health.

The infectious diseases are caused by minute living organisms which are able under certain conditions to attack and find an entry into our bodies. These germs compete with us for existence, and we can almost surmise the reason why the Deity has allowed them to exist when we observe that the people who are killed off are those who fail to study God's laws of Nature, and persist in holding some superstitious belief which has no foundation in fact. Disease also has other beneficial effects already described, in that it frequently prevents the birth of children by the vicious.

During the Middle Ages when the belief in miracles was at its height, there were numerous shrines and relics all over Europe which were supposed to produce miracles, and which were visited by thousands of pilgrims. These shrines and relics were a source of large incomes to the priests who owned them. In the face of a healthy scepticism, many of them fail now to attract the faithful. But the authorities of the Roman Church still support Lourdes, showing that they still fully uphold the doctrine of Divine intervention.

The Pope also calls himself the Vicar of Christ and God's representative on earth. How is it, then, that no Divine or other intervention occurred when Henry VIII closed the monasteries, confiscated their property, flouted the Pope and his authority, turned the Roman

Church out of the country, and made himself the head of a new communion ?

Again, when Luther defied the Pope and the whole Roman Church and was the means of liberating many millions from the clutches of superstition, why did no miracle occur ?

When within our own remembrance (1871) the Italians deprived the Pope of his temporal dominions and occupied Rome, why did no miracle occur to help the poor Pope ?

Again, when all the religious orders in France were expelled by order of the Government, some ten years ago, how was it that no act of God occurred to mark His disapproval ?

Either the Deity refuses to recognize the conceited claim of the Pope to be his representative on earth, or as every rational man claims, the Deity never interferes with His own laws, and miracles never take place.

The same results occurred in the early history of Christianity. In the fifth century, the Huns under Attila devastated the Christian Roman Empire. They carried their banners right up to Byzantium in one campaign, and had to be bought off with gold, after they had looted every city in their way. If any town resisted, they simply massacred men, women and children. In fact, one could almost think they must have read the instruction in the Bible which God is supposed to have given to the children of Israel. Samuel xv. 3 : " Thus

said the Lord of Hosts—now go and smite Amalek and utterly destroy all that they have and spare them not, but slay both man, woman, infant and suckling, ox, sheep, camel and ass." If you are a Christian and believe the Bible to be God's Word, why should you blame the Huns for doing what God told the Israelites to do?

In another campaign Attila laid waste the Western Christian Empire and got back with his spoils. Finally he invaded Italy, looted the country, massacred the people, razed many towns to the ground, and was only bought off by the Pope with gold and a disgraceful peace when he learned that the Roman armies were threatening his flanks and rear.

We may well ask why, in that age of miracles, none occurred to prevent this heathen barbarian from trampling on nearly the whole of Christendom.

We can also notice that Christianity after four centuries, instead of strengthening the Roman Empire, appeared to lead to its downfall.

Again, if Divine intervention takes place, we can only conclude that the Roman Church has been out of favour with the Deity for some hundreds of years. The most prosperous countries are Protestant and Rational. Spain, which until quite recently has been the great stronghold of Romanism, has gone steadily down from a first-class to a third-class power.

In Ireland, the contrast is still more marked : the Protestant portion is not only much more prosperous, but it is more law-abiding and more industrious and patriotic.

If I believed in Divine interference, I should lose all faith in the Almighty because of His failure to prevent the awful occurrences dripping with blood which mark the history of mankind. To allow the Huns in the fifth century their wicked way was bad enough, but nothing like so horrible as the evils committed in His name and that of religion ; such as the massacre of women and children described in the Old Testament, the murder of Hypatia by Bishop Cyril's monks, the hunting down of the pagans under Constantine, the persecution of the early Christians by pagans, the murders of the Inquisition, the massacre on St. Bartholomew's Eve, and numerous other crimes. We can understand and we believe that the Deity made the laws of Nature and left them unalterable. If man, instead of running after half-a-dozen different spurious faiths, would use his intelligence to study those laws, he would find that many of the evils from which men suffer could be abolished.

There is one trick which is played on the ignorant and the credulous by all priests, from the West African savage to the most cultivated of Christian priests. The believer is told to pray for what he wants. Let us suppose it is rain. If it so happens that rain comes at that

time, as it would have come in any case, then the priest says that the Ju-ju, if he is a West African savage, or the God of the Christians in other cases, has answered the prayer ; if no rain comes, then the Ju-ju or the Christian or other God, is angry because of some sin which the petitioner has committed ! It is quite simple, but those who are taken in by it are only simpletons or fools and deserve to die out in the struggle for existence.

Superstition which is so highly developed in the minds of all savages and barbarians, is one of the last traits to die out in civilized man. In fact it is only the highly evolved men with the best balanced brains who are entirely free from it.

Faith healing for disease is also another relic of our former savage condition, still remaining in the minds of some men and women in civilized countries, whose mental development has not yet reached the spiritual plane of Rationalism. The question can be very easily settled if the faith healers will submit to a simple test. The mortality from cancer every year in England can be ascertained from the Registrar's statistics. Let all the faith healers and all the Churches in Christendom, if you like, pray for the sufferers from this disease for a whole year, and at the end of that time let us see if the mortality is reduced.

CHAPTER IX.

THE DEITY, THE SOUL AND A FUTURE
EXISTENCE.

MOST religions assume the existence of a God, or three Gods, as in the Christian Trinity, or of many Gods, but if you seek for evidence of the existence of God in all the inspired writings of all the religions in the world you will not find any. It used to be said that the Divinity of Christ was proved by His miracles, but no proof could be found that His miracles took place beyond a statement. If that is a proof, then we must admit thousands of miracles by pagan gods as well.

We believe that the Great Almighty exists, for several reasons: (1) We find a hundred million worlds besides our own governed by law; (2) we observe the flame of life with all its marvellous manifestations in the millions of varieties of animal and vegetable life, and we know not its origin; (3) we realize that there is infinity of time and space, but we cannot comprehend it; (4) as man progresses in evolution, he yearns for a higher and more spiritual future, free from the drawbacks of his animal origin.

On these bases we believe in one God, who has made the laws of Nature which govern the worlds, and also our own little existences, and that He never interferes with His own laws (see Chapter VIII, "The Deity and Divine Interference").

Three of the chief religions, those of Zoroaster, Christ, and Mohammed, uphold a dual power in the government of the world—one evil, and one good.

We can only suppose that this view was the result of ignorance. Man was unable to account for the miseries from which he suffered, so he invented a devil to account for it. In that respect, the ancients of history had not progressed in religion much beyond the psychology of their savage prehistoric ancestors, who attributed every misfortune to an evil spirit. Even in modern times, until the advent of Rationalism, within the last 200 years, our bigoted and ignorant Churches, Roman and Protestant, declared some poor old women to be witches, or servants of the devil, and burnt them, or drowned them, for their supposed evil deeds.

A little investigation shows that men brought, and still bring, most of their misfortunes on their own heads, through their stupidity and false beliefs. Why should the men of the fifteenth century blame the Almighty or the devil for the Black Plague which devastated Europe? If they were stupid

enough to believe the ignorant priests who told them that disease was sent by the Almighty as a punishment, and could only be averted by giving money to the Church, they had only themselves to blame for the millions of deaths that took place.

Now that Rationalism has driven the hideous spectre of superstition back to the darkness to which it belongs, there is now no fear of the plague devastating Europe again.

If men refuse to use their intelligence, they must expect to suffer. Why live in a house liable to be struck by lightning, unless you erect a lightning conductor? Why build a house, or worse still, a town, under a volcano which may bury it in ashes, or why build on the banks of a river which has been known to flood the level you have chosen?

Why blame the Deity when a drought occurs? If you keep records of the seasons, you can ascertain at a glance how often a drought occurs in any district of the world. You then make provision for it beforehand, ignoring the Christian injunction: "Take no thought for the morrow," and the people are saved from starvation. If you are stupid enough to think that the Deity is going to dislocate His laws which govern a hundred million worlds, because you pray to him for rain, then you are conceited as well as stupid, and the people of the district will die of starvation.

Do you often suffer from pain? Blame

your parents or yourself in these modern times. You owe it to Rationalism that there is no Inquisition to consign you to a dungeon and put you on the rack. You owe it to Rationalism that there are morphine and chloroform to ease your pain and mitigate the horrors of war. If, apart from these external factors, you are a martyr to pain, then you yourself have either abused God's laws of health (which none of the religions taught you) or your parents ought to have known better than to produce you. Do not then blame the Almighty, nor be too hard on your parents, because Christianity did not teach them better, in fact Christianity led them astray by blessing their union and calling it a sacrament. A marriage which produces diseased children is a sacrilege, not a sacrament.

Take care then that you, at any rate, leave no children to inherit your bad health and suffer the pain you are now complaining of.

The disagreeable sensations which we call pain are messages sent by the nerves when anything is wrong in our bodies. Without these messages our lives would soon be extinct. The healthy man, apart from accidents, or attacks of disease, may go through the whole of his life and not know what pain is. By the use of our intelligence, but not by prayers and Bambinos, we can prevent most diseases—in fact, that triumph of Rationalism has been already achieved. Do not then blame the

Almighty or the devil if you suffer pain—blame yourself, or your parents, or Christianity for misleading them, or stupidity which still obstructs Rationalism and would hinder its triumphs over disease if it could.

This late horrible war was mainly due to the stupidity of the electorate of Great Britain. If a rich man with many treasures fails to take proper measures to guard his property, why should he cry out when the thief comes and tries to rob him? The police cannot be everywhere. But when in the case of nations there are no police, is not that nation extra foolish which has not a sufficient army to guard its treasures? You brought a Cabinet into power without ideals, which was afraid to tell you the truth, which was afraid to tell Germany England would fight if France was attacked, who were afraid that they would lose your votes if they told you the truth. Lord Roberts and many others advised you that Germany would some day declare war unless you had a large enough army to make it unadvisable, so you have only your own stupidity to blame, not the Almighty or the devil.

In the present state of the various human races, many of which have barely evolved from barbarism, the brigand spirit is by no means extinguished. Until all the small States are united in one or more empires, with a strong central Government to control them, there will be constant recurrences of war.

Those amiable people who suffer from a sickly sentimentality, who would turn the other cheek and who try to prevent the highly civilized nations from having armies, are the very people who provoke war and tempt the well-armed inferior nations to become brigands. The ancients long ago found out that the best way to prevent war is to be prepared for it. Do not then blame the Almighty or the devil for this war, but your own stupidity for not taking measures to meet it in face of a foe armed to the teeth, who had openly warned you of his intentions.

The anarchy in Russia to-day is again due to a want of resolution and courage on the part of the ruling classes, in allowing the reins of power to slip out of their hands into the hands of the mob, when the abdication of the Czar took place. Although vodka has been forbidden for the last few years, the constant soaking in it before then for several generations has produced a vast number of degenerates in Russia. We have there the curious spectacle of the most ritualistic nation of Christendom setting the worst example of brutality, stupidity and anarchy in the whole of Europe. Even the Germans reserve their atrocities for other nations, and not their own. It only shows how little real effect is produced on a nation by church attendance and ritual. Every little cottage in Russia had its icon or sacred picture where daily prayers were

offered, and the churches were always thronged. This strong religious sense in the Russians, by developing their superstition, actually impeded their progress. Now that autocracy has gone, we may expect that Rationalism will be able in time to develop and guide the spiritual side of Russia, so as to avoid the quagmire of exploded dogmas.

There is no need then to assume a Spirit of Evil to account for our troubles and misfortunes. Our animal origin, our ignorance and stupidity are quite enough to explain why we suffer.

All religions assume that man has a soul, that is to say, a spirit which is immortal and will continue to exist after death. To be quite honest, there is no evidence whatever that any person has a soul. It is merely an assumption. You say, I am quite sure I have a soul, I can feel it. Well, you need not be conceited about it, because it is a belief you share with every savage under the sun, including a belief in a future existence. Those savages who cheerfully allow themselves to be killed at a still robust age, so as to remain at that age in the next world, must feel quite as sure as you do that they have a soul. Even the half ape-like Neanderthal man of prehistoric times must have believed in a soul, because he placed weapons and food with his dead to accompany them on their journey to a better land.

Instead of assuming that we all have souls as the savages and the dogmatic Churches do, let us use the intelligence which the Deity has given us through evolution to try and find out His law on the subject.

One of the first things that will strike you if you study carefully and look out for facts and not assumptions, is this, that "the soul, if it does exist, is dependent on the body to a great extent." The Churches assume that all people have a soul which can be reached and made pure by religion. Those who think so, of course, mean their own particular brand of religion. There never was a greater fallacy. There are children who are born idiots, lunatics and criminals. They have idiotic, lunatic and criminal brains and souls. If you think you can alter this condition by any particular brand of religion, there is ample scope: you would no doubt be welcomed at the various asylums and prisons, but your labour would be wasted. Such efforts have been tried over and over again, and fail in a large number of cases. The condition of the body in these derelicts makes any but slight improvement in their souls impossible, and it is not dogma, but education which makes that little possible. There are many evil people, of course, who can be partly reclaimed. That is generally recognized, but it is not realized that there are *some* people who cannot, and never will be, reclaimed. All those who have actual experience in these

matters and deal with facts, instead of fancies, know this quite well, but public opinion is still dominated by the false belief that if you preach the Bible and religion to them, they can all be suddenly altered.

The chronic drunkard, the chronic thief, the sexual degenerate, the idiot and the chronic lunatic, should all be segregated and permanently prevented, not only from doing further harm, but also prevented from bringing children into the world to inherit their degraded propensities.

If there is a soul, we may suppose it to be represented by the higher qualities which exist in man. The yearning which many men and women feel for a more spiritual existence, free from the drawbacks attached to our bodies. Altruism, self-abnegation, sacrifice, death before dishonour, patriotism, in fact all the moral qualities. Think for a minute of those Rationalist martyrs who preferred to be burnt alive by the Inquisition rather than perjure their souls by confessing a belief they felt sure was false. It is impossible not to think that these wonderful men and women must have had souls; could anything be more sublime? The Christian martyrs to the Pagans, and the Pagan martyrs to the Christians were all equally steadfast, and revealed a spirit that rose high above the affairs of this world. On the other hand, we must point out that many of the great moral

qualities have been produced by evolution and the survival of the fittest. Maternal love and the readiness of a father to work for and even die in defence of his wife and children, is quite well developed even among the animals. Patriotism and self-abnegation, sexual morality and honesty are all qualities that are necessary for survival (see Chapter V, "Evolution in Modern Times"). Those in past ages who were without them have been destroyed to a great extent in the struggle for existence. We who are living to-day in Europe represent the cream of the human race, while millions of the unfit in past ages have died out.

If there is a soul or spirit separate from the body, how is it that a man's moral qualities, which we may suppose are part of his soul, can become evil through alterations in the structure or equilibrium of the body. There are a great many proofs of this. One of the best known is that produced by chronic alcohol poisoning, or the confirmed opium smoker. Even so slight a change as rise of temperature from the normal 98.5 to 104° F. will upset the equilibrium of the soul. A blow on the head, causing the depressed fracture of the inner table pressing on the brain, will produce epileptic fits and an alteration in the character. The most striking of all is the depreciation of morals found in patients who suffer from softening of the brain,

technically known as general paralysis of the insane.

If the soul then is a spirit which will exist after the dissolution of the body, how is it that alterations in the body condition cause alterations in the soul?

The best reason for the existence of the soul is our belief in the existence of the Deity. Before evolution had produced rational thought with all its great triumphs in the improvement of the human race, there was undoubtedly an immense amount of suffering, incurred by good and innocent people who had done nothing to deserve it beyond being stupid or holding an erroneous belief. If then we believe the Almighty to be a just and loving Father, we are driven to the conclusion that He will restore the balance by a reward in the next world to the souls of those who deserve it, and who have suffered unjustly in this world.

The struggle for existence and the survival of the fittest undoubtedly produces, and has produced, a great amount of suffering both in the animal world and in man, for which the Deity is responsible. He has no doubt good reasons of His own for this which are not revealed to us. We can at any rate say that the study of evolution and the struggle for existence have also produced men in recent times with broader views and more gentle natures. Since the rise of Rationalism, the

spirit of love, of self-sacrifice without any certainty of reward, care for the sick and the poor and the brotherhood of man, have all been developed ; while the cruelties of Christianity in the shape of torture and burning of heretics at the stake, and the murder of old women accused of witchcraft, have been abolished. In other words, the growth of knowledge produced by Rationalism has led to a great diminution and amelioration of suffering. This improvement will be still greater as time goes on.

That there is a hell of everlasting fire as Christ declared in His description of His second coming, we do not for a minute believe. We can understand that if Christ was a man, and not divine, he might very easily make such a statement, just as his later followers tried to produce hell on earth with rack and stake. But it is impossible for us to believe that the Great Almighty would consign erring humanity to everlasting fire for even the worst sins that have ever been committed. The punishment would not be that of a God who is love, and the penalty would be too great for the offence.

If then we conclude that men probably have souls (I say probably, because we have no definite proofs, nor have any of those priests who are so certain about it) what are we to think about the animals ? As man has been raised from the animals through evolu-

tion, it is only logical to conclude that if men have souls, so also have they. Many of us would like to think that our faithful dogs and horses will greet us with joy on our arrival in the next world. If the soul is composed of our moral qualities and all that is highest in us, who shall deny that some dogs have souls superior to those of some men? It may be that when man has progressed far enough from his animal origin to develop a spiritual side to his nature, the soul is developed with it.

All the Christian sects make use of the ten commandments that form part of the Mosaic Law, although they reject some of the other laws. At the same time, we are told that the Old Testament as part of the Bible is the Word of God. Why then do the Churches reject some of the laws of God given out by Moses and retain others? What is still more astonishing is that the existence of the soul was not revealed to Moses, although it had been believed in by the ancient Egyptians for some three thousand years before the Exodus.

Are we to suppose that the Deity forgot to give the Israelites a soul, or that He did not think they were good enough to deserve one, or is it not more likely that the Deity never inspired the Bible at all, nor the Koran, nor any other book, so full are they all of mistakes, inconsistencies and contradictions, false teaching and ignorance of the real laws of God, namely, the so-called laws of Nature?

Whether the souls of men ever revisit the earth, no one knows; the evidence in favour is at present too flimsy. All things are possible. The Rationalists await proofs. When a will is not to be found, or a murder is not solved, if mediums could communicate with the soul of the dead man and reveal the hiding place of the will, or the person of the murderer, we should be convinced. In any case, it would be difficult to even find a particular soul when there must be thousands of millions in the next world.

CHAPTER X.

THE MATERIALISM OF THE CHRISTIAN
CHURCHES.

ALTHOUGH materialism is in direct contradiction to the teaching of Christ, the Churches were from the point of view of evolution quite right to secure all the wealth they could lay hands on; because in the struggle for existence, wealth, as I have pointed out, is one of the factors which help survival. At the same time this materialism has alienated millions of men, who are unable to respect a Church whose acts are entirely at variance with the instructions of its Founder.

If the advice of Christ had been followed in regard to money, it is very doubtful whether Christianity would be existent to-day.

That this materialism, which is so often flung in the face of the Rationalist, has existed and still exists in the Christian Churches of to-day, I shall now endeavour to show.

Modern savages unable to rise above the idea of a personal God who interferes in their little mundane affairs, very naturally do their best to placate Him by means of material

benefits, in the shape of offerings to the local juju.

This idea, which probably existed among our prehistoric savage ancestors, is found permeating and running through the ancient religions, and to this day is still firmly entrenched in the chief Christian sect, namely, the Roman Church.

As we are only removed 150 to 200 years from the superstition and barbarism of burning people alive for practising magic and witchcraft, it is probable that the average modern man is unable to form any conception of a Deity who would be absolutely indifferent to any material offerings. Particularly if he believes what the priests have told him, that man is made in the image of God.

If you try to realize that there are a hundred million worlds that can actually be seen in the immensity of space, some of them so far distant from us that the light from them, travelling at the rate of 186,000 miles a second, takes years, and in some cases hundreds and even thousands of years to reach us, you will then begin to realize that the Great Almighty who owns all these worlds, and who has made the laws which control them, is not to be bought by any material offerings, which in his eyes are less than dust on this little grain of dust, our earth, in the immensity of space. It is absurd to make offerings to the Deity at all, when He already owns, not only all you

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can give, but everything else in the universe. Nothing that man can do by his puny efforts can add to the Glory of God which is infinite. The vast sums that have been spent on temples and cathedrals add only to the glory of the priests, and by their huge cost impoverish the people and impede God's law of evolution.

We can quite imagine that the Deity is pleased when we make use of our wealth to assist His laws by holding up the lamp of Rationalism to those who are still held in the bonds of superstition ; and by using our intelligence to overcome evil and make this world of ours a better place to live in.

This idea of offerings has been exploited by priests in all ages and lands for the acquisition of material wealth.

In ancient Egypt, 1500 years B.C., before the exodus of the Israelites, the priests of Amon trading on the superstitions of the Pharaohs, obtained huge presents after and before every campaign. The amount continued to increase each reign until the material wealth of this Church amounted to 20 per cent. of the whole revenue of the kingdom. The swarms of priests paid no taxes and also escaped military service. So much did they absorb the wealth of the country that one of the later Rameses had hardly enough revenue to pay his troops or sustain his court. Finally, the high priest of Amon seized the throne and the empire

began to go to pieces. Later, one of the Pharaohs, Psamtik, took control by appointing his sister high priestess. About 540 B.C. Amasis openly taxed them for the support of his fleet and army. All this time the priests were preaching a quite lofty morality which in respect to materialism they failed to practise.

In order to secure the benefits of the next world, a sacred beetle was sold, which when laid on the breast of the mummy (the preserved body of the dead) was supposed to prevent the god Osiris from knowing the evils perpetrated by the dead man during his life!

Another method was to sell the Book of the Dead containing an acquittal of the deceased, a space being left for the insertion of the name of the buyer. This book was buried with the mummy and was supposed to secure the entry of his soul into heaven, however vicious his life may have been! ("History of Egypt," Brasted).

Are there not people alive now, 3,000 years later, who still believe that some priests can by a certain ritual ensure their entry into heaven after death, and that the Deity can be indirectly bought to shorten the visit to purgatory, by a money payment expended in masses for the dead?

In fact all the corruption of the ancient Egyptian religion has been repeated in Europe in the name of Christ instead of

Amon. The popes, claiming to be the representatives of God on earth, trading on the superstition of the States of Europe, gradually usurped the sovereignty of the Christian world, and then used this power to riot in materialism and wealth. Every possible means was used to obtain riches for the popes, cardinals and priests. In the year 1376 our own House of Commons presented to the King an urgent remonstrance affirming that: "the taxes paid to the Pope nearly amounted to five times as much as the taxes paid to the kings!" ("The Persecutions of Popery," by Frederic Shoberl, 1844 (Richard Bentley), p. 151). Monasteries and convents were multiplied because they were a source of income to the Pope. Petrarch writing in one of his letters of the papal court at Avignon stated: "In this city there is no piety, no reverence or fear of God, no faith or charity, nothing that is holy, just, equitable or humane" (*ibid.*, p. 161). This was from a man who was a devout Roman Catholic.

• Estates, domains, palaces, works of art, and every conceivable form of materialism were flaunted in the face of the world by the popes, cardinals, bishops and priests of Christ, who had said, "How hardly shall they that have riches enter into the Kingdom of God" (Mark, chapter x, verse 23).

To this day there is materialism, but not to the same extent, because modern men have

too much sense to be taken in by superstition ; consequently the revenues are very much smaller than they were. Even now the incomes of the pope, cardinals and bishops of the Christian Churches, Roman, Russian and Anglican, are those of rich men, and many a Lazarus is glad of the crumbs which fall from their tables.

Very few of us appreciate the enormous benefit conferred on Englishmen when Henry VIII broke with Rome and sequestered the material wealth of the monasteries and convents. He cut out at one operation a huge festering cancer which had been draining the moral and material strength of the nation for centuries. Perhaps a greater benefit still was the abolition of a dual form of government, part political and part ecclesiastical. It is not too much to say that the subsequent prosperity of Great Britain, the enormous growth of the British Empire, and the blessings of liberty, justice and progress, are partly due to the bold spirit of Bluff King Hal. As the popes believe themselves to be the Vicars of God and also believe in His miracles, they must sometimes in the quiet of their study wonder whether their claims to that position are justified, since the nation which defied the Vicar of Christ has continued to progress ever since and may now be said to lead the world in the glorious path of evolution, while no miracles have occurred to help the poor popes to recover their former powers.

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The ancient Egyptian priests who sold sacred beetles, and inscribed books of the dead guaranteed to gain for the possessor a future place in Heaven, were just the same as the Christian priests some three thousand years later, who sold indulgences guaranteed to effect the same purpose.

The Rationalist of to-day may well wonder at the mental condition of those who believe such a dogma.

The popes of Rome have made desperate efforts to recover their power by trying to play off one nation against another, irrespective of any moral question. One of these efforts was the declaration of Infallibility, the most easily refuted of all the papal claims.

The following are some of the facts which disprove the dogma of Infallibility.

Pelagius, a British monk in the sixth century, was condemned by Pope Innocent I for heresy. This pope happened to die soon after and his successor acquitted Pelagius. One of these popes, therefore, could not be infallible.

For centuries the Papacy maintained that the earth had only existed for five to six thousand years since its creation. Geology gives actual proofs that the world has existed for many millions of years.

They maintained that the earth was flat, because it would be impossible for all the faithful to know of the second coming of Christ if it was round!

The earth was also supposed to be the centre point of space, whereas it is nothing of the kind, but merely one planet of one small solar system among many.

They taught that the sun went round the earth, and imprisoned Galileo and threatened him with death for daring to tell them the truth.

They declared that man was created perfect in the image of God. We know now that man has gradually developed by evolution from the image of the man ape to his present improved position.

Man was supposed to have suddenly fallen and incurred the curse of God because he ate a prohibited apple. We know now that instead of having fallen, man has risen from the ranks of the animal to that of a human being far above all animals.

England was excommunicated at the time of the Reformation; instead of doing harm, our country flourished better than ever. If miracles can occur and the Pope is the representative of God on earth and infallible, why did not a miracle happen to convince the heretics of their awful behaviour!

The law of evolution applies to the religions of this world quite as much as it does to nations and individuals. The three factors in survival are morality, intelligence and strength. If a religion is a moral one, backed by intelligence and supported by power, it

may last for many centuries, although quite erroneous, but when corruption sets in and the morality of the religion is not practised by its priests, opposing faiths will, in the struggle for existence, begin to depose it. Although the Egyptian religion lasted four thousand years, nothing now remains of it except the doctrine of the Trinity, which has been grafted on to the Christian faith.

The decline of the Christian Churches has been brought about in the same way by corruption. The first blow came from the Mohammedan religion. The men of this faith led more upright lives and showed greater morality, intelligence and strength than the Christians. As a result, almost half the Christian world was given over to Mohammed.

In later times the same result has followed in the struggle with Rationalism. The Roman Church with its curious pretensions to authority, its want of toleration, its fear of knowledge, its opposition to liberty, is the very negation of evolution. It is even afraid to let the faithful read certain books for fear their faith should be disturbed, so insecure are their foundations. The Rationalists have no need of any such precautions. Let them read the Bible and the Koran and all the other religious books. They will only serve to confirm the view that the only known laws of God are those of Nature, and evolution is the greatest of them.

It must not be supposed that evolution is against the accumulation of wealth. The survival of any individual, or tribe, or nation, in the struggle for existence will depend partly on accumulated wealth or capital. When war begins, production of food and other necessities is very much restricted; and among nations that which has the most capital has the best chance of survival, other things being equal.

The past history of the Christian nations and the Christian Churches shows that they have, to a great extent, ignored Christ's teaching in regard to wealth. In other words, whilst preaching a spiritual life, they are eager for material benefits.

In addition to the explicit instructions which Christ gave to His followers: "Provide neither gold, nor silver, nor brass in your purses, nor scrip for your journey, neither two coats nor yet staves" (Matthew, chapter x, verses 9 and 10), He evidently had an animus against rich men, for He stated: "Woe unto you that are rich for you have received your consolation" (Luke, chapter vi, verse 24).

This is further evidence of failure on the part of Christ to realize God's law of evolution.

In the struggle for existence, the Christian Churches are losing ground, because they are unable to use force in modern times or massacre their opponents.

CHAPTER XI.

EVOLUTION AND RELIGIOUS TOLERATION.

IT is hardly necessary to say that evolutionists are strong supporters of religious toleration. No other religious body has ever taken up that attitude before in the history of the world.

Although the Anglican Church has never indulged in the orgies of slaughter practised by the Romanists, nor in the private infamies of the Inquisition, it nevertheless made life in the past not only unpleasant, but almost unbearable to the Nonconformists, until the Rationalists reduced its power to impotence. Even the Nonconformists were not quite free from the taint. The Scotch Presbyterians were much worse than the Anglican Church in burning alive people who practised magic and witchcraft, and are to this day intolerant Sabbatarians and would like to force their opinions down the throats of those who take a broader view of the seventh day.

In every rational nation, where the laws of the realm are made for the benefit of the whole nation, irrespective of any religious sects, there are bound to be cases where these laws clash with the tenets of the sects.

For instance, a Mohammedan is allowed four wives by his religion, but if in England he married even two, he would be prosecuted for bigamy. Again, the law of the land allows a man to divorce his wife for immorality, whereas the Christians do not allow divorce. We must in this connection distinguish between the law which is penal, like that for bigamy, and the law of divorce which is permissive. In other words, the law says you shall not have two wives, but whether you divorce an immoral wife or husband or not, is your own affair. The law gives you the option. The Christians then have no ground for complaint, because they need not make use of the divorce laws unless they like. They can be as immoral as they like, and still continue to live together. Although the Christians are not prevented by the law of divorce from practising and carrying out their own views of indissoluble marriages, they are so intolerant as to try and force their views on those who hold an entirely different creed of morality. If a Christian finds that his wife is a lunatic, he can continue to live with her and produce lunatic children if he wishes, but why should he be so intolerant as to oppose the men who consider such a union immoral, and therefore a ground for divorce, whether it be the man or the woman who is at fault?

The same argument applies to the intolerance displayed with regard to the Sabbath. If the

Christian likes to be miserable and omit health-giving games on Sunday, by all means let him do so, but why try to force his methods on other people who hold entirely different moral views on the subject?

The Rationalists do not say to the Christian, Do as I do, nor try to prevent him from going to church; then why should the Christian try to prevent the Rationalist from playing games on Sundays?

The old leaven of intolerance which led to the massacres and burnings by the Roman Church is still present, although shorn of most of its malevolence.

When there is perfect religious toleration in a nation, a better chance is given to that nation to progress; because it is not held back by worn-out dogmas. The natural attitude of all priests is to oppose any new knowledge or progress which does not accord with their particular dogma. When, as we have tried to show, some of these dogmas are erroneous, the priests will do their best to stop progress, rather than acknowledge that they have been in error.

Here, in England, we have not as yet arrived at a full measure of toleration. If we had, either all religious sects would be represented in the Government, or none. As it is, only one, the Church of England, is represented in the House of Lords. It is quite unfair to the Nonconformists and Romanists. Either all or none should be represented.

One of the most valuable assets in the strength of a nation is unity. For this purpose, all religious sects should be on an equality. Education should be given by the State and no Church schools should be allowed. Sectarian education tends to keep up the cleavage between different sects and works against union. An enterprising Minister of Education should call a round-table conference of the different Christian sects and address them in the following words:—

“You say that God is love and that your Master told you to love one another; proceed to put that into practice and draw up a scheme of religious instruction for the Board schools. If you cannot agree, then we will have secular education.”

When the various Christian sects have united on this question, they can then begin to talk about reunion, but not until then. In fact, Christendom never was united, as a study of history shows, and in all probability never will be, so vague and hazy are its foundations.

The great advantage of complete toleration is this—the best religion is the one which will survive in the struggle for existence. In the last 100 years the number of Rationalists has enormously increased with a corresponding emptying of the Christian churches, although one of these is backed by the State and large endowments.

A study of God's laws of physiology and

health demonstrates to us the mistake of continued labour. Time must be allowed for the repair of the tissues of the brain and body used up in work. Unless provision is made for this, gradual exhaustion takes place, followed by ill-health. In order to promote evolution and the upward progress of the human race, health is one of the most important factors. Experience has taught us that man requires one day of relaxation in every seven. The method of relaxation will depend on the mode of life of the individual. The brain-worker confined to an office will find his best result in some outdoor exercise. While the manual labourer will probably prefer some intellectual diversion. Those who minister to their fellows' wants on Sundays should be allowed a holiday in the week to make up. The idea that the Deity for some obscure and unexplained reason considers that every seventh day is holy, appears to us to be ridiculous, and was originally merely a claim on the part of the priests to sustain their own power.

CHAPTER XII.

EVOLUTION AND SOCIALISM: ARISTOCRACY AND PRIVILEGE.

WE may define Socialism as an attempt to redress the enormous gap that lies between the poor man and the rich man and to put them on the same level, in regard to material wealth. Unfortunately for the Socialists, the law of evolution shows that equality is impossible.

In the first place, evolution produces inequality. If you take a survey of mankind scattered over the globe, you find some races to be still in the Stone Age. How is it possible then for civilized man to accept savages as his equal? Unless Socialism is a sham, it must according to its creed accept all men as equal. If, however, you leave savages out of the question and confine the experiment to a civilized nation you are again confronted with an inequality among individuals, which is almost as great as that between a civilized nation and a savage one. Moreover, once you begin to do away with competition, you prevent the best men from rising to the top, and you are helping the indolent beer-swilling good-for-

nothing to survive. When evolution is given free play, the best survive and the worst die out.

It is not the slightest use to try and kick against one of God's laws of Nature. It would of course be quite possible to start a Socialistic State, but as soon as it came into competition with an Individualistic State and war ensued, the Socialist would be wiped out. Its army would be without discipline, and there would be no generals to lead it. You need only look at Russia to-day. The army which threatened to engulf Germany actually melted away under a Socialist Government. Germany took what she pleased and robbed Socialist Russia of anything she wanted.

One of the Australian Socialists some few years ago had the opportunity of putting his theories into practice. He was given a large tract of land in Paraguay, where a number of Socialists from Australia settled. The colony started under the best auspices, but was a complete failure and had to be given up. (See "Where Socialism Failed," by Stewart Graham. John Murray.)

Our own Trades Unions in England numbering some millions of men are run on Socialist principles. What is the result? There are constant breaches of discipline. The petty salaries given to the leaders are not enough to tempt men with great brains to lead them, consequently their power in the State in proportion to their numbers is almost nil.

The most ridiculous of all the tenets of Socialism is the objection to capital. The greatest benefactor of the human race, next to the inventor, is the man who saves money, or its equivalent, and thereby becomes a capitalist. Before the war, 200 millions sterling came into Great Britain every year. This represented the interest on capital and brains devoted to the development of foreign countries, at the earnest solicitation of the people in those countries who were unable to do the work themselves, for want of brains and capital. The British workman is under the delusion that all the wealth he sees about him has been produced by himself. Nothing of the kind; this 200 millions a year, at any rate, has been produced by the grit, brains, character and capital chiefly of the English middle-class, who found a better field for their industry and brains abroad than they could in their native land. The uncertainty produced by repeated strikes drives capital and brains out of the country to foreign lands, much to the detriment of the British workman. It is the misuse of capital which should be attacked. The manufacturer who makes use of his capital to grind down the face of the poor is as much an enemy to the evolution of mankind as the idiotic Socialist who is always abusing capital.

The first step forward on the road to civilization made by prehistoric man was the

accumulation of capital. Before that time he was no better off than the animals who surrounded him and lived from hand to mouth. The greatest benefactors to mankind were those early men of genius who had original ideas and first suggested the growing of crops and the domestication of animals. As soon as that was achieved, mankind became capitalists. When the winter months came, the spectre of famine no longer dogged their steps. Nor did they have to work so hard for a bare subsistence. This leisure gave them more opportunity for thinking out further problems of existence and of improving their lot.

It would be an excellent object lesson to a Socialist who does not believe in capital to give him a piece of land in a new country without any capital, and let him see what he could do. Before he could even clear the land he would starve, unless capital found food for him during that period, and seed also and agricultural implements, and also food for him while he built a rude hut. If he tried to live on the game and fish, he would still require capital for his gun and nets for fishing.

If the Socialist compares his condition with those of the working classes in Turkey, Persia, and other countries before the war, he will then be able to appreciate what brains of exceptional men, aided by capitalists, have

done for him. Every blessing which he has—a water-tight house, with gas and water supply and sanitary arrangements, cheap furniture, cheap and good food, cheap beer, cheap clothes, cheap amusements, protection from enemies—all these and many other advantages have all been produced by brains and capital; and yet he always grudges the emoluments for brains and the interest for capital. In all great wars, other things being equal, the country with the largest capital won. The Socialist State which does not believe in capital, even if it could fight, would soon be starved out.

Think of the advantage to mankind of the railways. A working man can travel in comfort, safely and rapidly for a penny a mile. His forebears had to pay three times as much and took more time over it, and in less comfort. Who provided the railways—who were these benefactors? The inventor and the much abused capitalists.

One of the results of the inequality of men produced by evolution is the formation of an aristocracy. But it does not follow at all that a man is an aristocrat because he comes of an old family and estate. He may not even be a gentleman, nor his womenfolk ladies. He may even be a degenerate, or a criminal. Something like half of our old families degenerated so much that they died out entirely, not only in the direct line, but

in all descendants. Evolution only recognizes a man to be an aristocrat when he is morally, intellectually, and physically a good deal above the average of other men. The fact that one of his ancestors was such a man at some remote date has nothing to do with it. To grant privileges to a man because of a remote ancestor is against the law of evolution and the survival of the fittest, just as much as the silly Socialist idea of equality. Every son of an aristocrat should be obliged to win his spurs in open competition and no title should be hereditary. Our own hereditary aristocracy in England is probably the best in the world, although it has not yet grasped the meaning of evolution. When we compare them with those of France before the first revolution, or with Poland before its division, or with those of Russia of to-day, or with the Junkers of Prussia, we may, as Englishmen, well feel proud of their record. The only family entitled to privileges should be the Royal family, because it is part of the emoluments of the high office the King holds and the great responsibilities cast on his shoulders.

If you consult history, or even our own times, you will realize how many kings have been murdered or executed, in many cases for no great fault of their own, but as the result of their position and the faults of the men around them. A really good and conscientious Royal family like the present at the head

of our great Empire gives greater stability to the Government than would be found in a succession of Presidents to a Republic. Stability of government is a most important factor in the evolution of a nation. It is impossible for progress to continue if riots or civil war often take place. On the other hand, many kings have obstructed the evolution of their nation by the misuse of privilege and favouritism.

This particularly applies to the timid. Instead of choosing the best men for the high offices of State, they have chosen those who were most likely to stand by the king. The disastrous results of this policy were well exemplified by Napoleon III and his incompetent generals in the war which brought him toppling down from his throne. The law of evolution demands that the best men should come to the top.

Many of our difficulties and blunders during and before the present war were brought about by the abuse of the party system, which prevented many of the best men from rising to the top and guiding the nation. Now that the war has thrown the party system into the melting pot, and the survival of the fittest is not so much interfered with, we find that many of the most successful leaders are men who stood entirely outside party politics.

CHAPTER XIII.

FREE WILL AND FATALISM.
RESPONSIBILITY AND SIN.

THERE are two great Schools of Thought : one which would have us believe that every event is determined in advance and therefore it is no use to struggle against Fate ; the other that by our action and free will we can mould our own fortunes within certain limits.

There are no means of proving which of these theories is correct. We may say, for instance, that a general has three or more possible plans of campaign, that he may be led to modify his first intentions by the receipt of further intelligence, which finally decides his action, and that as he chose one out of several plans, he therefore has free will. The fatalist will reply that he had no choice, and was obliged to take the course he did. As we cannot alter what has taken place, it is impossible to prove whether the general might have come to a different decision if he wished.

It must be obvious to most people that a denial of free will is not only an obstacle to

evolution and that upward climb of the human race to a higher spiritual plane, but it is also a very definite obstacle to moral improvement. If a man believes that everything is predetermined, he can just as easily decide that everything is predetermined in the way he wants it, and thus give rein to his baser instincts and passions to the detriment of society, and himself in particular.

If, on the other, he accepts the doctrine of free will, he is obliged to recognize his own responsibility for any act that is contrary to the rights of society at large.

Most people who think will soon perceive that their free will is limited to a certain extent. The two chief factors which effect this are heredity and environment. The effect of heredity is very noticeable in the case of those with defective or unstable brains. When a man like the Dartmoor Shepherd, who has served repeated terms of imprisonment, and has also been helped and encouraged to lead a new life, still persists in crime and also in one particular form of crime, one may say that Fate has decided the matter for him and he cannot escape it. But the reason that he cannot escape his fate is that his brain is diseased. If it were normal, he would have free will strong enough to reform.

Some men who inherit the tendency to drink too much alcohol entirely succumb to the craving, but a certain number overcome

this strong inherited tendency by the strength of their free will, take to teetotalism and become decent members of society.

There are some people then who are the sport of Fate, their behaviour and their end may be predicted with fair certainty, not because there is no free will, but because their brains are diseased and they are not responsible for their actions. The more highly developed and the nearer to normal a man is, the more scope there is for his free will, and the more is he the architect of his own fortunes. A man of this type is freer from prejudice, and although a highly religious man, he is free from the narrow sectarian views of the priestly cults. His environment, including his education, will not have the same clogging effect on him that it would have on another man whose evolution has not reached so high a standard.

But even the men with the finest intellects are influenced, to a certain extent, by their environment, and are sometimes unable, on that account, to attain the position which they not only deserve, but in the interests of the race they ought to hold.

Such a result is brought about by defects in our social system, by which posts are filled through privilege with men of second-rate powers, instead of being given to the best men, irrespective of birth, influence or connections.

Every man's life is moulded to a certain

extent by events beyond his power to alter, however great his free will. The onset of the late war entirely changed the future for thousands of men, but it did not prevent the exercise of free will by the first heroic hundred thousand who volunteered to fight for their country at the first bugle call to arms.

If we take a general survey of the ladder of organic life, from the lowest organism up to man, we find evidences of free will on the upper rungs of the ladder, while on the lower the organisms appear to be almost automatic. Nor is there any hard and fast line to be drawn between the two, the one gradually merges into the other. Any claim on the part of man to be the exclusive owner of consciousness, is easily negatived by those who have made a study of the psychology of the higher animals, or even an intelligent insect like the ant.

Before the wonderful revelation by Charles Darwin of the law of Evolution, it was necessary to have some explanation of the apparently natural tendency of man to do those things which were detrimental to society. Hence the fable of Eve and the forbidden fruit. Knowing, as we do now, the real facts of man's origin, we can easily understand the nature of sin. Those men who show anti-social qualities, or in other words commit sins, have not evolved far enough from the animal conditions of pre-

historic man, or else they are degenerates who have lost the recently acquired social attributes of their more immediate ancestors.

People who prattle about universal peace fail to take into consideration the fact that some races of men are not far removed from their cousins, the man apes, and that between them and a civilized race like our own, are many grades of barbaric and semi-barbaric nations, who can never be restrained from going to war, in fact they can only be kept in order by rule of force. Even the highly civilized Western nations have only just emerged from barbarism. Our much vaunted Christianity was first and foremost in burning alive people accused of magic and witchcraft only a hundred and fifty to two hundred years ago. It was only given up then with reluctance, because the Rationalists pointed the finger of scorn at a practice common to all savages, and showed that this Christian practice was a mere superstition without evidence to support it, and absolutely unworthy of a civilized nation. We may then regard the burning of witches and heretics as a relic of our barbarous or animal state—in other words, it was an anti-social act or sin carried out under the camouflage of the Christian religion and the authority of the Bible.

Every normal man must accept the responsibility of his own acts, and the more highly

developed a man's brain may be, the greater is his responsibility, because he has greater free will and is better able to understand the nature of his acts. At the same time, we ought to realize that there are many men who are devoid of free will in certain directions and are not responsible for some of their actions, because their brains are diseased. This irresponsibility is not great enough to bring them within the action of the lunacy laws as they now stand, and a reform in this direction is badly needed.

A good example of the result of environment in determining the course of our lives is afforded by the action of the Christian Churches in baptizing babies. These infants at an age when they have not the slightest idea of the meaning of religion are nevertheless pledged to a certain line of faith whether they like it or not, subsequently when still in their early teens, before their minds are developed, they are confirmed? For some fifteen hundred years of Christianity the Roman Church taught that unless the baby was baptized before it died, the poor little mite went straight to hell and everlasting fire! Could any Faith be more horrible? What a slander on our merciful Father the Great Almighty. We may also regard the whole process as a masterly example of priestcraft to rope in as many proselytes as possible at an age when they are unable to think for themselves or

know their own minds. Nor is it surprising that the Churches, having secured members by this method, should try to throw as much odium as possible on the apostate who repudiates the religion which has been thrust upon him willy-nilly in his youth before he was able to understand its contradictions and superstitions.

Still more astounding is the fact that large sums of money and thousands of missionaries are sent out by these same Christian Churches in an endeavour to make apostates from other religions! An apostate from the Christian religion is a horrible man! but from any other religion, if he is converted to Christianity, he is a shining light! No child should be bound by any religious vows which tie it to any particular sect. If some sort of ceremony is required before a person can become a member of a religious sect or communion, it should not be performed, or even allowed, until the candidate has reached the age twenty-one. By then he or she should be old enough to understand something of the nature of the responsibility they are undertaking.

CHAPTER XIV.

EVOLUTION AND THE PREDATORY INSTINCT.

ONE of the chief faults of most religions is the failure to face the facts of existence. With most clerics religion means wallowing in a bath of emotionalism, while a system of camouflage hides the unpleasant truths of this world, and particularly those which conflict with their particular dogma.

The poet who said that Nature is red in tooth and claw enunciated a great truth, while another poet deceived his readers when he said that every prospect pleased and only man was vile.

It is an absolute fact that throughout Nature, the strongest rules. Millions of birds, beasts and fishes are torn to pieces and devoured every day by the predatory members of their species. The human race is little better; although we do not actually tear our prey to pieces like the tiger, we kill millions of sheep and oxen, &c., and devour them. With the development of our consciousness, we do this as humanely as possible. To that even there are exceptions in the world of sport.

If the Great Almighty interfered in the affairs of this world, would He not do something to stop all this suffering? Is there the slightest evidence that "one sparrow shall not fall on the ground without your Father"? Is it not a fact that tens of thousands of sparrows fall to the ground, dead from cold and hunger in severe winters, or torn to pieces by the sparrow-hawk, the cat and others? There can be only one explanation, namely, that everything going on in this world is subject to fixed laws made by the Almighty, and that He never interferes with them. The predatory instinct, so far as the animal world is concerned, makes for survival of the fittest.

In regard to man we must distinguish between the instinct which man has to prey on other animals, and the instinct which he also has to prey on his fellow-men. The former will most likely always be present, the latter is gradually dying out. Men in all probability existed very early in the history of our race who found it easier to rob their neighbours of the results of their labour rather than work hard themselves. As long as they were able to do this successfully it was a strong factor in survival. Because the robber obtained food, and the robbed very often died out from starvation. Gradually, as men's brains developed, they began to realize a still better system for survival, that each man should be allowed to hold the results of

his labour, and that the man who robbed and did no useful work must be exterminated.

As soon as a community large enough to hold its own adopted this system, the dawn of civilization began, and the fittest to survive were those with the moral principle to allow each man the fruits of his labour. The men of a higher morality without the predatory instinct began to multiply at the expense of the robber and the bandit. Even a cursory study of history will show how slow the process has been. Brigandage still exists in some parts of the world to this day, and is apt to break out as soon as the restraining hand of a settled government is loosened. We may observe it in full force in Russia to-day among the Bolsheviks.

The ancient nations who exterminated the bandits within their own borders still retained a collective predatory instinct, and history for the last six thousand years has been little else than attempts of one State to rob another of its lands and revenues, and make slaves of its inhabitants, even down to the present day. But whatever helps survival, be it only a slight advantage, will in the end prevail. That is why the predatory attempt of Germany to steal its neighbour's goods has failed. The majority of mankind are now convinced that law and order and justice are necessary for the evolution of mankind, and any nation that wantonly disregards these laws must pay the

penalty, as much as any individual bandit. This has been brought about by the survival of the non-predatory men in greater numbers than the predatory.

There are still in existence Governments that will not allow bandits within its borders, but who are imbued with the instinct, and whose officials, in the name of the law, do not hesitate to rob their subjects. The most flagrant examples of this were to be found in Turkey before the Great War.

Within the borders of civilized States the same thing crops up in the shape of the burglar and the thief, requiring a large police force to keep them in check. We ought to be thankful to the severity of the ancient laws of England which led to the elimination of most of these men in past times.

Now that we understand more of the laws of evolution we can carry out this elimination in a more humane way. *Instead of working against the laws of God (which are the laws of Nature) by a sloppy sentimentality, we should work with them and help the elimination of the unfit.* This could easily be done by segregating all habitual criminals, &c., in a labour colony where they could not produce children, or do any harm to the community, but where they could be well but firmly treated as irresponsible for their actions.

We should not by this means entirely cleanse the human race of its refuse, but we should

produce a very great improvement. Whenever degeneration occurs, the brain is apt to reproduce the brute instincts of our prehistoric ancestors : hence the anarchists who want to destroy everything and contribute nothing. With further education, degeneration will become less frequent (see chapter on Sex Relations), when people realize that their chief duty in life, if they marry and have offspring, is to produce healthy children, and the worst sin they can commit is to produce a diseased or weakly child.

There are other manifestations of the predatory instinct which are not so obvious as those discussed. I refer to the robbers and bandits who despoil the public while keeping within the law. Short shrift should be given to the men who, while their country is bleeding from her wounds, attempt to make fortunes by raising the price of food or other commodities. Equally to blame is the working man who when doing necessary war work, strikes for exorbitant wages, while his brothers are dying in his defence on the field of battle.

In peace time, this same type of man is constantly at work. His happy hunting-ground is found among the widows and the orphans, the retired officers and the professional man. By means of bogus companies and posing as a moral financier, he robs these people of their hard-earned savings, but keeps within the law, and finally retires to a country

estate and acquires a reputation for liberality by giving away other people's money. Then there are the men who rig up a worthless stock on the market, and persuade their friends to buy while they themselves are selling in secret. All these men are no better than brigands, in fact they are not even the equal of the old brigands who took to the mountains, for they do not even risk their lives. Like a voracious spider, the City swindler within the law sits in his office and devours the innocent flies caught in his web of chicanery and deceit. Like the ancient brigands, these men ought to be exterminated. They are one of the chief blots on civilization, and decent men should bring in legislation to trip them up.

Many amiable people suffer from confusion of thought in regard to *Force*. To say that "Force is no remedy" is drivel. The whole of history and experience contradicts any such dogma.

When the burglar is undergoing a sentence of three years' penal servitude, force is the remedy which has placed him there, and prevented him during that time from preying on honest folk. Force enabled the Turks to hold Jerusalem and Palestine for centuries against all the prayers, intercessions and moral force of the whole world of Christendom. And now it is again force which in this great war has at last driven them out again. In the struggle for existence, Force has to be met by Force.

In the resulting clash, Force backed by morality and intelligence will always beat Force with less morality and intelligence, if numbers are about equal.

But if you hold the false idea that "force is no remedy," you will suffer the same fate as the Armenians, for instance, and other like-minded races. To turn the other cheek to your enemies is to encourage and perpetuate all the evils from which Rationalism has rescued you.

CHAPTER XV.

EVOLUTION AND INVENTION.

DO you realize how great a debt we owe to the inventors and men of original ideas? Consider the Neanderthal man of the Old Stone Age. The geologists estimate that this race existed for three hundred thousand years in ancient Europe, and yet during the whole of that time they never produced a man to give them the idea of even a primitive agriculture, or of taming and domesticating animals for food. In all that immense period of time, the only important advances they made were chiefly mechanical, in the shaping and perfecting of flint and bone implements and weapons. They had two men of genius: one who suggested the use of fire, and the other who domesticated dogs and trained them for the chase.

The cooking of food constituted a great advance, and must have helped survival enormously, when it is realized how many diseases may be conveyed by raw food, such as tubercle, trichiniasis, typhoid, dysentery, &c.

Can we wonder then that another and more inventive race supplanted them? Geological

evidence shows that they entirely died out thousands of years ago. If it were not for the inventors we should still be in the Stone Age, living from hand to mouth in caves, leading a miserable existence compared with which life in a modern workhouse would be a dream of luxury.

One of the early inventions that must have caused a revolution was that of the bow and arrow. There is no evidence of the use of this weapon by Neanderthal man. It appeared first with the advent of the Cro-Magnon race, during the comparatively recent period known as the Magdalenian (see Chapter II, p. 45). There can be but little doubt it was one of the decisive factors in the extermination of the primitive Neanderthal race. One can quite imagine the opposition by the conservative members of the tribes to such an innovation. An obstructionist to progress would get up at the tribal pow-wow and state that in his opinion a reliable club or stone was worth more than any new-fangled weapon, just as our own non-progressives scoffed at the submarine and other inventions. In those days a challenge to a duel between the two weapons was probably very easily arranged. When an arrow pierced the stomach of the fathead with the club and another went through his chest, the question was at once decided. How very rare real inventive genius must have been, when we realize that the

bow and arrow remained the chief weapon of offence among the nations of the world for thousands of years until within a few hundred years of our own time, a period dating from the advent of the Cro-Magnon race of approximately 25,000 years ago.

When the Caliph Suleiman attacked Byzantium in the eighth century with an Arabian army and some 400 vessels, he met with a complete defeat, due, according to most historians, to the action of a then recent invention, Greek fire. Although we know the name of the Caliph and the Emperor in this combat, the name of the inventor who saved Byzantium is not even mentioned, as far as I am aware.

We raise monuments to acclaim our generals and admirals on all sides, and to a certain extent our politicians, but it is hard to find one in honour of an inventor of note. If we consider the four greatest generals the world has produced, Thothmes III, Alexander, Cæsar and Napoleon, what did these men achieve? During their life-time they conquered many lands and altered the map. After they were dead, their empires sooner or later broke up, and in the case of the conquered countries reverted to their former boundaries. What else did these generals do? They brought untold misery on millions of people, and caused the death of hundreds of thousands of men. Of course the great general who saves his country when it is attacked is undoubtedly a

great man, deserving of the highest honour. Compare now the services of a great commander with those of a man like Pasteur who, instead of causing suffering, helped to abolish it; instead of destroying life saved tens of thousands of lives while his salary was about one-fourth of that received by one of our bishops. This beneficent work did not cease with his death. The light of his genius has continued to spread over the world and the results accruing from his work will remain the unalienable heritage of the races of the world until this planet ceases to exist.

Consider the benefits derived from Faraday's discovery of electrical induction; of Stephenson's great idea of the steam railway engine; of Jenner's discovery of vaccination with cowpox against smallpox; of Lister's development of Pasteur's work leading up to the antiseptic and aseptic systems for surgery. Can you realize the stupendous results these men achieved for civilization, work which is not evanescent and local like that of most generals and politicians, but which benefits the whole world and will continue to benefit the whole world until the crack of doom? How do we honour these men? Is there any statue in Trafalgar Square to any of them, or in any prominent position in London? How do we treat inventors? Is any great honour shown to them during their life? Very rarely, and then only if they have also a business instinct and

are able to secure a large fortune. Even if a title is granted, it is one that can also be easily secured by a rich brewer who contributes a sufficient sum to the party funds. Does it not often happen that some vulgar and unscrupulous capitalist cheats the inventor of his work, makes a fortune out of it, and then will have the effrontery to say that he does not think much of inventors?

If a country wishes to be successful, if Governments wish to raise the human race, to help on evolution, to stop starvation, to relieve suffering, they should give every advantage to the inventor, and in the case of a man of genius he should be taken care of by the State, and encouraged and helped in every possible way to continue and increase his beneficent work.

In the struggle between the nations, that one which is most ready to adopt new war devices is the most likely to survive. Our Admiralty before the war entirely failed to grasp the possibilities of the submarine, with the exception of Sir Percy Scott, all honour to him. If the Germans had had a man of genius to appreciate the value of the submarine and there had been five hundred ready at the beginning of the war, before we had time to take counter measures, we should have been starved into submission. As it was, the Germans nearly succeeded.

CHAPTER XVI.

THE MESSAGE OF EVOLUTION.

WE believe: There is but one God. He hath neither wife nor children.

He has made the laws of Nature.

He never interferes with the working of his own Laws.

He rules over a hundred million worlds besides our own little planet.

There is no evidence that any miracles take place, or have ever taken place.

He understands everything: the flame of life, infinity of space and time.

Man has not fallen from any state of former perfection.

The exact contrary has taken place. Man has slowly improved and developed from the animals, and is made in the image of the anthropoid apes.

It is a blasphemous idea to think that this can be the image of God.

Having developed so far, man will continue to improve through God's law of evolution, by means of which the immoral, the vicious and the wicked, as well as the weaklings, die out.

We have only recently emerged from

barbarism. In the future our descendants will marvel at our superstitions, our stupidities and our immoral conventions.

Our most important duty is to work with and assist God's law of evolution.

In order to do this, we must help the elimination of the vicious, the drunkards, the lunatics, the feeble-minded, the criminal, the anarchists, and the degenerates.

At present, we work against the law of evolution. A sickly sentimentality, fostered by erroneous religious teaching and dogma, does its best to preserve the worst elements in the nation.

There are two chief methods by which the world can be improved.

The first is by education and a higher religious ideal.

The Christian and other Churches consider that morality is satisfied if couples are married.

Evolution requires a more spiritual standard of morality.

Instead of assuming that because you are married you are at liberty, like the beasts in the field, to have as many children, how and when you like, you must realize your responsibility and obey God's laws of physiology.

One of the greatest sins you can commit is to produce diseased, or degenerate, or weakly children.

Do you realize how much suffering is

brought into the world by the failure of parents to understand this responsibility?

Would you like to have a child or children and see them martyrs of disease of the body, or, still worse, of the mind?

If you who are reading this are a sufferer from your parents' lack of knowledge or morality, take care that you, at any rate, do not produce any poor little children condemned to a life of pain and suffering.

To have no children is a great deprivation to inflict on you, but we believe your Heavenly Father will reward you for your self-abnegation. That He will appreciate your altruism, and when your naked soul after death stands before the Great Judge of all our actions, you may with truth say, I have tried to prevent suffering and realized the spiritual side of marriage.

Not only is it necessary for diseased people to avoid leaving children to inherit their disease, but it is also necessary for healthy people to understand the laws governing the conception and growth of children, in order to prevent degeneration of a healthy stock.

The second method by which we may aid God's law of the survival of the fittest, is the segregation of the worse types of the unfit.

There are numbers of people who are doomed to extinction, but who under present conditions manage to live long enough to leave children. To prevent this, and by that

means to assist the laws of the Deity to cleanse the human race, it is our duty to segregate at any rate the worst specimens.

The inhumanity and scandal of allowing the chronic drunkards and petty offender, or habitual criminal, to undergo repeated convictions, and to spend half their lives in prison and the other half in leading a depraved life, is cruel and unworthy of an intelligent society.

By all means let every type of offender have one or more chances of reform, but if he is incorrigible he must be segregated, and the women as well as the men.

There are also other classes besides the criminal. The drunkards are a menace to the race, because they so often produce degenerate children.

The lunatics are to a certain extent confined, but there are a large number of lunatics who during their sane intervals produce children. These people should either be sterilized or segregated, unless they are moral enough to avoid producing children.

The feeble-minded, the idiots, many of the epileptics, the man who deserts his children and their mother and leaves them to starve, the woman who ill-treats her children, the men who prey on society and rob within the law, the chronic loafer, vagrant, beggar and cadger, all these men should be swept into the net.

It is an inhuman and ridiculous system to

keep on sending these people to prison for short terms.

They should be placed in farm labour colonies and well treated, but obliged to work, *and not allowed to have children.*

The worst cases should be kept in separate farms and never allowed to leave them. The women should be sterilized so that they could not bear children, but could still fulfil the functions of a wife. A marital union might then be allowed with a male in the colony.

Under a benevolent supervision and mild discipline these derelicts would lead much happier lives, and at the same time would cease to contaminate the race.

We, as a nation, ought to feel ashamed that this working with God's law of evolution has been ignored by ourselves, but has already, to some extent, been carried out on the Continent, in Belgium, Germany and Switzerland.

The question of custody could be much simplified by choosing one or more small islands for those who required permanent segregation.

It is useless to talk of improving the environment of the poor and doing away with slums, if we do nothing to get rid of the people who create slums. Holmes, the police court missionary, made the same observation.

Besides, environment is not the only factor in the creation of degenerates. A proportion

belongs to the classes who have every advantage of a good environment. So much is this the case that many well-known families with large wealth and every advantage of good education, food and fresh air, have died out.

On the other hand, bad housing, city life, want of fresh air are undoubtedly causes of degeneration, but not so great as the effects of inherited disease, vicious habits, over-indulgence in alcohol, and last, but by no means least, ignorance of the physiological laws of health and reproduction.

Marriage.—The life of the race, of the nation, and of the family, is dependent in a great measure on the laws relating to marriage.

The Christian Churches call marriage a sacrament. What is there sacred about the marriage of diseased persons who will bring little children into the world condemned to a life of suffering?

Evolution demands a more spiritual union than Christianity. Husband and wife must think less of themselves and more of the children they are likely to procreate.

If diseased persons wish to marry they should be exhorted to prevent children from coming.

The best marriage for the race is a permanent one. Throughout Nature the parents in nearly all cases look after their children until they are grown up. If a woman has

several children this means a union of twenty to thirty years.

In order to achieve this there should be a time of probation for six months or a year before engagement. Couples should be obliged to obtain official sanction to this. During this period either side should be at liberty to break off the relation. At the end of this time there should be three months of betrothal, when either side could still separate, but only by giving a valid reason. By this means many mistakes could be avoided. Marriage should only be allowed if these probation and betrothal periods had been carried out, and if the woman could produce three certificates, one showing a knowledge of motherhood and its duties, another of domestic economy, and a third of health. And the man must show that he is able to keep a wife according to his station in life, and also understand the physiological laws which produce the birth of healthy and diseased children and a certificate of health.

In addition, the man should be older than the woman by five or ten years, because a man's sexual life lasts longer than a woman's.

When every precaution has been taken to ensure a permanent union by marriage many cases will still occur which prevent that happy result being attained.

One or both of the partners may lapse into drunkenness, lunacy, disease or crime.

In the interests of morality, of the race and of the individual, there must be some method of dissolving such unions when only one of the partners is to blame. A solution is found by the law of divorce.

It is a disgrace to civilization and productive of immorality, when the poor man or woman is unable from want of means to free themselves from an immoral partner.

To avoid licentiousness divorce should not be made easy, nor should it in the interest of evolution be too narrow.

The Christian view that divorce should not be allowed at all is absolutely immoral.

When a married couple are unable to live together divorce should be allowed after three to five years' separation.

When this is not allowed irregular unions occur which are bad for morality, the State, for the race and the individual.

The most important grounds for divorce are disease and immorality. To confine divorce to sexual immorality alone is to take a very narrow view.

In order to obey God's law of evolution by which the fittest survive and the unfit die out, divorce should be allowed from any condition by which diseased, degenerate or weakly children are born.

There would be then much less suffering in the world. It would be possible to close some of the hospitals. If the segregation of

the existing unfit were carried out as well we should be spared the spectacle of the best members of the race paying taxes to enable the worthless to exist and multiply.

Lunacy, criminality, drunkenness, epilepsy, consumption, leprosy, syphilis and gonorrhœa uncured, and all forms of severe disease, impotence and sterility, should be grounds for divorce. In the worst cases of lunacy and incurable drunkenness, &c., the law should be not merely permissive but obligatory.

To produce diseased children is not only the worst sin a couple can commit—it is also a crime against society.

The vast sums of money which are now squandered on prisons, police, reformatories, workhouses, lunatic asylums, sanatoriums, homes for inebriates, imbeciles, idiots and such-like might be easily reduced to one-half, or less than that if these people were segregated so that they could not produce children.

If the conditions before enumerated were made grounds for divorce, the healthy persons freed from their tainted partners could form a new union, free from the immorality of producing diseased offspring.

Marriage is for the benefit of the children, not of the parents. The instinct which makes a man or a woman fall in love with one of the opposite sex, having qualities which are complementary, has been acquired because the children thus produced are better than those

of haphazard unions. The better children survive and tend to inherit the same instinct.

It is also one of the reasons why so many married people have opposite tastes and often fail to agree. Men who expect their wife to have the same interests in life as themselves show a lack of intelligence, and vice versa.

Each partner to a union must allow the other to follow his or her inherited tastes, whether it be in music, sport, or science, &c.

The most beautiful women and the finest men are always the result of a love union.

Whenever a weakly, diseased, or deformed child is born from healthy parents, the fault is not that of the child but is produced through the ignorance of the parents.

The children of very successful and celebrated men are often weakly, in spite of the fact that the father is a man of great strength and constitution and the mother quite healthy. This result is brought about by the exhaustion of the father in his life's work. In this way Evolution puts her veto on the ruthless man with a greed for gold, and the selfish man with ignoble ambitions. Their descendants tend to die out.

In addition to these types there are the men who overwork themselves in their anxiety to provide for their families. Such men should avoid producing a conception except at the end of a holiday when their health is recuperated. If conception occurs when a man or woman

is in an unhealthy condition a weakly or degenerate child is born.

It is still more important that the mother should follow somewhat similar rules. If for any reason she is out of health conception should be avoided. Between the birth of one child and another there should be an interval of three years to allow the mother to recuperate. Childbearing should not begin before 18 and should cease at 35 in most cases.

No general rule for all can be laid down, because mothers vary much in their health. The stronger a woman is the more often can she have children without bad results. The more delicate she is the more care must she take to have but few children and those at the best period of her life, and the more steps must she take to raise her health to the highest point at the time of conception and during gestation.

During this time when the child is growing within her womb, she must not be led away by the pleasures of life to expose herself to anything deleterious to her health, like late hours, the vitiated atmosphere of entertainments, &c. A more spiritual view must prevail, and the mother must remember the helpless little life entirely dependent on her for the joy of existence, and the misery and suffering engendered by ill-health and disease. There are many cases where the selfishness of

the mother during gestation is the one and only cause of a child's ill-health and suffering after birth.

Every man and woman should realize their duty to the State and to themselves and their children, to keep themselves in a healthy condition. Civilization has only been in existence for a few thousand years, and before that time man for five hundred thousand years, or longer, had to gain his means of subsistence by constant physical work in the open air. Consequently, if modern man fails to take exercise out of doors, his health sooner or later deteriorates.

The means of subsistence were by no means ample, and if our savage ancestors were able at times to gorge themselves, they often had to fast for days together when wild animals were scarce and the advent of domesticated animals had not been achieved. The result of this mode of life developed a constitution of body still present in modern man, which deteriorates under excessive eating and drinking and want of exercise. Many men and women suffer in health and die earlier than necessary solely from over-eating. Their faculties are never at their best, because the nervous system is constantly poisoned by the products of decomposition in the bowels, the result of an excess of food, and often associated with a lack of exercise.

Another common cause of ill-health is the

breathing of vitiated and contaminated air. A young healthy man may continue for some years to lead an unhealthy life, but the day of reckoning comes sooner or later, and very often too late to be remedied. The laws of the Deity in regard to health are inexorable, and those who defy them are always punished by suffering, no matter whether the defiance is deliberate or due to ignorance or stupidity.

All men and women commit a sin when they neglect their health. They are offending against God's law which has decreed that only the fittest survive.

In order that humanity shall progress and fulfil the great law of evolution made by God, it is necessary that peace should reign in social and national life. It has taken thousands of years for this fact to sink into the minds of men, and not all of them have realized it even now.

When there is continual fighting in a country there can be no progress. Property is not secure, food becomes scarce, labour is wasted and unproductive. Poverty and famine soon stalk through the land. This does not mean that fighting can always be avoided. In order to ensure peace, the strong nation of high morals must be in a position to make war so effectively that other nations will not dare to break the peace.

The greatest achievement of humanity has been the substitution of law and justice for

private revenge and petty warfare in private and public life. In time, no doubt, as men's minds progress, the same result will follow in the international relations of civilized nations. While the semi-savage nations, not having arrived at so high a spiritual plane, will continue to make war on each other. This absence of war in private, public, and international life, does not in any way interfere with evolution. The survival of the fittest continues just the same, and so also does the elimination of the unfit, except in those cases pointed out, where man's laws and social usages interfere with God's laws. If the religion, laws or customs of a nation enable the unfit, the immoral and degenerate to survive and multiply, while the healthy, moral and best types are overtaxed, and therefore unable to have large families, then the end of that nation is not far off.

When the laws of a country are just and administered with justice, competition takes the place of petty warfare. Every man has an object in working hard when he knows that the fruits of his labour will be secured to him. Competition is of the very greatest importance, because, on the whole, the best type of man is the most successful, and on that account better able to enable his children to survive who inherit his good qualities. Without competition the worst types can survive as well as the best, and God's law of evolution is not

obeyed. Instead of the race improving it begins to deteriorate.

Every boy and girl, and every man and woman, should be taught the importance of consideration for other people than themselves. The men and women who declare that they intend to lead their own lives, irrespective of others, proclaim themselves degenerates. They fail to appreciate the great law which is necessary for the progressive evolution of society, viz.: "Behave to others and think of others as you would like them to behave and think of you."

The wise men of past ages arrived at this principle many thousands of years ago. The Egyptians, the Persians, the Buddhists, the Romans and others realized that no society of human beings could long exist on a selfish basis long before Christ was born. Nor could a group within the nation be tolerated if it led a mode of life devoid of consideration for others.

When you feel tempted to do wrong, at once ask yourself "Should I like this done to me?"

Would you like anyone to rob you?

Would you like anyone to murder you?

Would you like anyone to deceive you?

Would you like anyone to slander or libel you?

Would you like anyone to seduce the wife you love?

Would you like others to show envy, hatred and malice to you?

Would you like others to be cruel to you or cause you unnecessary pain of mind or body?

Would you like your parents to have given you ill-health, deformity of body or mind?

If you are unfortunate would you like others to help you?

If you fall by the way and make a single false step, would you like others to condemn you and never give you another chance to recover?

If you are unjustly accused, would you like your friends to condemn you unheard?

If you are unsuccessful in life would you like your friends to give you the cold shoulder, or would you prefer they should encourage you to try again?

If you left your wife a widow, and badly off, would you like others to help her?

And your children, if you die suddenly before they can fend for themselves, would you like others to help them?

If your children are left orphans is not the need greater still?

Whatever, then, you would prefer to be done to yourself see that you do the same to others.

You would not like others to prevent you from exercising your religion; very well, do not interfere with other people on account of their religion.

Remember the persecutions of the pagans by the Christians, and the awful tortures practised by the various Christian sects on each other.

By explaining and describing to others the religion of evolution, you can help them to lead a more spiritual life. You can make them realize that money is not the chief thing in this world, and will not exist in the next. That those who receive thousands of pounds for giving spiritual advice belie their office.

Luxury, show, ostentation, vanity, and self-indulgence, all help to lower your spiritual life. Ritual is of no importance whatever in a spiritual religion. The materialism which has produced cathedrals and churches, vestments and incense, ritual and big incomes for cardinals and bishops, has not reformed the world.

The test of a man's religion is not what he believes, but the life he leads, and by that will he probably be judged, whether he be a Confucian, a Buddhist, a Christian, or a Mohammedan, or a Rationalist.

Carry your consideration for others into your daily life, into your business, your home and private life.

Remember that you are merely one of a community and dependent on others for your very existence. Consider the welfare of the community more than your own.

You who are employers of labour, would you like to be obliged to work and live under unhealthy conditions; to feel that your health was being gradually drained from you; to see your children weak and puny, the result of

your own ill health? You would not? Then take care that you look after the health of those you employ. See that your workshops are airy and well-ventilated. That the atmosphere is not laden with dust or poisoned by fumes. That the sleeping accommodation is ample and healthy. That the men and the women have some open-air place for recreation in fine weather, and club-rooms for wet days and winter nights. If your men are driven into the public-house for want of these things, the blame will fall on your head whether you be a private employer or one of the boards of a corporation or company.

Do not imagine for one moment that you can clear yourself of this responsibility by giving a donation to a charity or sixpence to a crossing-sweeper.

If you continue to neglect your duties in this respect, the day may come when in the struggle for existence you will find yourself bankrupt. The best workmen will desert you, and your business will not prosper; or you may be swept away in the next war we are engaged in. Conscription has shown that less than 40 per cent. of our manhood is sound and strong. If without any allies to help us we were pitted against another nation with a population equal in number to our own, but with 60 per cent. of them strong and healthy, we should be defeated, other things being equal. Your wealth would then be confiscated

and ruin stare you in the face. Are not the Russian nobility and upper classes suffering to-day because most of them gave themselves up to corruption, debauchery and selfishness ?

See then that those you employ live under healthy conditions. Our ridiculous system of coddling the unfit and enabling them to multiply in direct contradiction to God's law makes quite enough without your adding to them.

If you enable your workmen to lead healthy lives, you will also strengthen their spiritual natures and lift them to a higher plane. This can be greatly aided by refined music, good literature, a love of flowers, &c., and lectures on evolution and God's laws of Nature.

The condition of a man's soul and his moral nature depend in a great measure on his health (see Chapter IX). Pity the rich man who has sold his health for gold, for bitterly shall he regret it !

If you lead an evil life, believe not the priests who tell you that you can buy your way into heaven with money and repentance. The Great Judge, we believe, will weigh you in the scales and mete out to you perfect justice, whether you be a king or a crossing-sweeper, a moral imbecile or a great philosopher.

Some of the rich men in the world to-day, but not all, are little better than bandits. They band themselves together in a so-called

Trust (Mistrust would be a better title) in order to corner one or more of the necessities of life, and then raise the price to the rest of the community. This is in direct contradiction to the chief law of evolution, viz. : "To behave to others as you would they should behave to you." Decent men and women instead of fawning on these men on account of their wealth, should ostracize them and treat them like lepers. The Legislatures should pass severe laws and give a good dose of penal servitude to the offenders.

If you are a capitalist, you can be of great service to the community, provided you use your capital in a moral way, for the uplifting and benefit of mankind, while you benefit yourself as well morally and materially.

If you are a *manual working man*, do not be an absolute fool and rail at your best friend, the decent capitalist. The moral man with a fine intellect is even more necessary to you, to provide you with remunerative work. Are you so absolutely silly as to think that you are the equal of the heads of great industries? As a matter of fact, most of you do not even possess a tenth part of their brain power. You have nearly half the votes of the electorate, and yet you are only represented in the House of Commons by less than one-fifth of the seats. Why is that? Because you fail to realize that God's law of evolution means *inequality*. Because your petty jealousies and

failure to realize this prevent men of great intellect from leading you. Because your discipline is lamentable. Because your mental vision is obscured by the greatest of all fallacies, Socialism. Because you tolerate in your midst men condemned to extinction by God's law of evolution: Anarchists, Bolsheviks, and their like. Because you who rave about liberty and equality, actually support the tyranny of the Bolsheviks in Russia who have abolished liberty.

Do you realize why you are a manual labourer and have no capital? Or perhaps you are a clerk on a small wage. It is due to your own personality and that of your parents and immediate ancestors. In your ignorance you imagine that your position is due to some malevolence on the part of others better off than yourself. If you hold such an opinion, it at once condemns you and explains your position, because it shows you are lacking in intelligence.

The qualities necessary for success in life are morality, sobriety, courage, intelligence, and health. Inquire and ascertain if your parents and grandparents had these qualities. Do you yourself possess them? .

Let us take the most important first: Morality. Are you honest? Do you ever try to cheat your employer by doing as little work as possible in exchange for a fair day's wage? If so, you are dishonest, and in addi-

tion you are working against your own interests. In your general relations with others are you always honest? When you make an agreement with your employer to work for a certain time at a certain rate, do you always keep the agreement? Is it not a fact that you do not always keep it, and that you are often a dishonourable man?

Sobriety.—Are you in the habit of getting drunk from time to time? Do you fuddle your brain with too much beer? Do you waste your money and time in riotous living?

Courage.—Are you afraid to face risks, or are you content to be almost a slave rather than run the risk of something worse?

Intelligence.—When you are earning large wages, have you the sense to save some of it for a rainy day, or do you spend it all on self-indulgence? Do you realize that even the animals appreciate the benefits of capital? The squirrel saves up food for the winter. Have you enough intelligence to realize that the house you live in, the roads you walk on, the clothes you wear, and the food you eat, could not have been produced without capital? Go to a poor country and you will find a vast difference: although there is plenty of labour there is no capital. Capital consists of two things: clever brains and money. Very well then, save some money for the winter of your life.

Health.—If you suffer from ill-health, you

either inherit it, or have acquired it. If the latter, can you be sure that it is not due to your own mode of life? If you inherit it you may well blame the State and the Christian religion. So devoid of spiritual ideals are they that diseased people are actually encouraged to propagate by calling their union in marriage a sacrament. Such a union is a sacrilege, not a sacrament.

See then that *you*, suffering from ill-health, do not produce any poor little children to inherit your defects.

Do you realize now why you are a labourer? Can you understand why it is that the honest, sober, intelligent, and healthy men are successful in the struggle for existence, while those without these qualities are hewers of wood and drawers of water? *Are you so wanting in intelligence as to think that any Socialistic ideas from puny man can ever alter the fixed laws of the Great Almighty?*

Do you behave to others as you would they should behave to you? When you strike for higher wages, do you realize that all the other working classes will have to pay more for the article you produce? When it is coal, for instance, many a poor man will have to shiver during the winter months on account of your selfishness.

Are you a politician? Do you carry your religion into politics? When you have to vote on a contentious measure, what guides

you? Do you vote for what is best for the race, or what will please your party leaders most, with one eye on office and the other on a title? If you are a party leader, are you ever influenced in your measures by large sums of money given to your party funds by interested donors? When you have to deal with great strikes, with reform and retrenchment, do you initiate what is best for the country and the race, or do you think of the votes you may lose if you do your duty? If the mass of voters hold erroneous views, it is your duty to educate them into correct views, and not to drift with them into a disastrous war as you did recently. Is there no such thing as honour and duty to your country? Was it because you were knaves and not fools you were unprepared for war, and very nearly brought the Empire to destruction? Do you realize that your neglect of duty might have imperilled liberty and progress and set back the evolution of civilized mankind for a thousand years?

- Whatever then may be your work in life, above all things be honest and never behave to other people in a way that you would not like them to behave to you. Have the courage of your opinions, do what is right, even if it is against your own interests. So feeble is the moral fibre of most people that they are afraid to express their opinions for fear of a loss of popularity.

The Christian sects speak of this world as a Vale of Tears, and we can well understand the reason. History will tell you how materialism was rampant among the Churches, superstition reigned almost unchecked, while the neglect of the real laws of God, the laws of Nature, allowed disease to decimate the population.

Now that Rationalism has changed the face of the earth there is no need to be a pessimist. Disease is now in a great measure controlled. Superstition cannot now call you a witch and burn you alive, nor will you be done to death because your belief in the religion of evolution is unorthodox. If the measures advocated for improving the race and getting rid of the criminals, drunkards, lunatics, idiots, and imbeciles are carried out, the world will become quite a happy place to live in.

It is quite true that a time will come when the population of the world may outstrip the food supply. But that need not cause any anxiety—it will only make necessary the limitation of families.

When therefore your work is properly done, enjoy yourself in such a way that you will be refreshed and strengthened for further exertions.

There is no harm in amusements, but only in the way they are carried out.

Dancing was condemned by the narrow-minded Puritans and Nonconformists.

It is absurd to condemn a healthy and pleasant amusement because a small number of people degraded it by indecent methods. The healthy, normal girl loves dancing, because it gives expression to the exuberance of her spirits, which are often kept too much under repression. At the same time there is the sexual attraction to those of the opposite sex. This attraction will find expression whether dancing is allowed or not. On the other hand, to dance in a vitiated atmosphere, to keep late hours night after night, are very bad for health and is entirely condemned. The successful evolution of the race depends on good health.

The same arguments apply to dancing on the stage. It is not the want of dress that makes a woman indecent, but the misuse of dress and its suggestiveness.

Gambling for small stakes as a mild amusement does little harm. On the other hand, the man who lives by gambling is of no use to the community. He produces nothing for the common weal, and if all men were the same the world would die of starvation and evolution would come to a standstill. There are others who try to add to their income by betting and cards. They are usually degenerates, and belong to the froth of society.

Many men in civilized countries are conscious at certain occasions in their lives that their spiritual side is being strangely moved.

It is as if the Spirit of God had touched their souls. They feel a yearning after the ideal, for what is beautiful, clean, wholesome, while their animal propensities seem to fall into abeyance.

The condition may be brought about in town under the influence of good music by some of the great masters. But it more often occurs in the country. It may be an April day, when a soft wind whispers to the opening daffodils the coming of spring, and the thrush breaks forth into an ecstasy of song; or it may be a warm summer day, when the hum of the bees and music of the zephyr murmuring through the trees, woos us to meditation, by the side of some rippling stream.

When this spiritual stimulus is on you, embrace it, stamp the recollection on your mind, and when your moral nature wobbles, try to recall the inspiration. Do what you can to provide good music for the masses, to encourage a love of flowers and appreciation of what is beautiful in life. Uphold justice, denounce tyranny and unfairness, privilege and favouritism. Let every man have an equal chance of rising in life, so that the best may come to the top irrespective of birth, for such is the Great Law of Evolution.

Is a man justified in committing suicide? The Law says no, and punishes him when it can. It may be in the future the law on this point will be changed.

Looking at the question from the point of view of evolution we are obliged to acknowledge that there are strong reasons to support suicide. In the first place the verdict almost invariably given at the inquest on these unhappy persons is that they were of unsound mind. Is it a good thing for society and the human race to try and preserve people of unsound mind, or is it better for them and all lunatics to die out? Are they not, in fact, condemned by God's law of evolution to die out in the struggle for existence?

What every man should consider before making up his mind to do away with himself is this: "How will my death affect other people?" Supposing he has a wife and family, are they going to suffer by his death? Every case must be considered on its merits. If the desire to leave this world is brought about entirely by a combination of circumstances that make life intolerable, but without any unsoundness of brain, then a man should certainly wait and hope that a ray of sunshine will break through the clouds to make him change his mind. Who will reproach the Armenian girls who cast themselves over the cliffs rather than submit to be dishonoured by the Turks? Who will blame any man in Russia to-day who shoots himself rather than be tortured by the Bolsheviks and killed in any case?

If, on the other hand, a man is of unsound mind, it is better for him to commit suicide than to remain a burden on the sound population. If he continued to live, he might leave children to inherit his unsoundness.

There is one class of case where suicide is perfectly justifiable. When any person is suffering from an incurable disease, and particularly when this entails agonies of pain, and death must ensue sooner or later, it is absolutely cruel to refuse the tortured man or woman permanent relief from suffering if they demand to be released from this world. Can any one for a minute imagine that the Deity would wish suffering to go on when it could be ended? How can the clergy possibly hold such a doctrine, and at the same time tell us God is Love?

Proper safeguards could easily be arranged so as to guard against crime.

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